Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Product Description

Troubleshooting

Illustrated Parts

Removal & Replacement

Jumpers & Switches

Specifications

Welcome to the **Presario 7800 Series and 5900T Maintenance and Service Guide**. This online guide is designed to serve the needs of those whose job it is to repair Compaq products. Many of the components of the hardcopy MSG are contained in this online guide. The Notice contains the copyright and trademark information. The Preface shows symbol conventions, Technician Notes and Serial Number locations on the unit.

Download a ZIP file of the complete MSG to local hard drive.

This MSG will be periodically maintained and updated as needed.
To report a technical problem, contact your Regional Support Center or IM Help Center.

For content comments or questions, contact the Editor.

Top

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Notice

The information in this guide is subject to change without notice.

COMPAQ COMPUTER CORPORATION SHALL NOT BE LIABLE FOR TECHNICAL OR EDITORIAL ERRORS OR OMISSIONS CONTAINED HEREIN, NOR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE FURNISHING, PERFORMANCE, OR USE OF THIS MATERIAL.

This guide contains information protected by copyright. No part of this guide may be photocopied or reproduced in any form without prior written consent from Compaq Computer Corporation.

© 1998 Compaq Computer Corporation.
All rights reserved. Printed in the U.S.A.

Compaq, Presario Registered U. S. Patent and Trademark Office.

Microsoft, MS-DOS, and Windows are registered trademarks of Microsoft Corporation.
Windows 95 is a trademark of Microsoft Corporation.
Windows 98 is a trademark of Microsoft Corporation.

The software described in this guide is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of the agreement.

Product names mentioned herein may be trademarks and/or registered trademarks of their respective companies.

Maintenance and Service Guide

Compaq Presario 7800 Series and 5900T
Personal Computers

© 2000 Compaq Computer Corporation

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Symbols

The following words and symbols mark special messages throughout this guide.

	WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or loss of life.
	CAUTION: Text set off in this manner indicates that failure to follow directions in the caution could result in damage to equipment or loss of data.

IMPORTANT:	Text set off in this manner presents clarifying information or specific instructions.
NOTE:	Text set off in this manner presents commentary, sidelights, or interesting points of information.

Technician Notes

	WARNING: Only authorized technicians trained by Compaq should repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly/module level repair. Because of the complexity of the individual boards and subassemblies, the user should not attempt to make repairs at the component level or to make modifications to any printed circuit board. Improper repairs can create a safety hazard. Any indications of component replacement or printed circuit board modifications may void any warranty.

Serial Number

When requesting information or ordering spare parts, the computer serial number should be provided to Compaq. The serial number can be found on the back of the computer next to the fan grill and on the front bezel behind the drive access door.

Locating Additional Information

The following documentation is available to support this product:

- Compaq Presario documentation set
- *Introducing Windows 98 Guide*
- Service Training Guides
- Compaq Service Advisories and Bulletins
- *Compaq QuickFind*
- *Compaq Service Quick Reference Guide*
- *Compaq Help Center*

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Product Description

Product Description
Models and Features
CPU Controls & Lights
Keyboards
CPU Back Connectors
Digital Creativity Imaging Center (DCIC)
Power Management
Power Cord Requirements

This section describes the models and features of the Compaq Presario 7800 Series of personal computers. Use the navigation bar at left to find specific features.

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Troubleshooting

Troubleshooting
Clearing CMOS
Power-On Self-Test (POST)
Diagnostics Software
Troubleshooting Without Diagnostics

This section provides troubleshooting information for Compaq Presario 7800 Series Personal Computers. Power-On Self-Test (POST) messages appear in tables.

The message and code tables include a description of the error, the probable cause, and the recommended action that should be taken to resolve the error condition.

Adherence to the procedures and precautions described in this section is essential for proper service.

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Illustrated Parts

System Unit
Mass Storage
Cables
Boards
Modems
Keyboards/Mouse
Monitors
Return Kits
Documentation

This section provides illustrated parts and a reference for spare parts numbers for Compaq Presario 7800 Series Personal Computers.

When requesting information or ordering spare parts, the computer serial number should be provided to Compaq. The serial number is displayed on the back of the chassis and behind the drive cover.

Removal and Replacement

Removal Sequence
Preparation for Disassembly
Serial Number Location
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply

This chapter provides general service information for Compaq Presario 7800 Series Personal Computers. Adherence to the procedures and precautions described in this chapter is essential for proper service.

The topics discussed in this section include the following:

- Electrostatic Discharge
- Generating Static
- Preventing Electrostatic Damage to Equipment
- Preventing Damage to Drives
- Grounding Methods
- Grounding Workstations
- Grounding Equipment
- Recommended Materials and Equipment
- Tool Requirements
- Screws
- Cables and Connectors

Electrostatic Discharge

A sudden discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Often the spark is neither felt nor heard, but damage occurs. An electronic device exposed to electrostatic discharge (ESD) may not be affected at all and will work perfectly throughout a normal cycle. Or it may function normally for a while, then degrade in the internal layers, reducing its life expectancy.

Networks built into many integrated circuits provide some protection, but in many cases, the discharge contains enough power to alter device parameters or melt silicon junctions.

Top

Generating Static

The accompanying table shows typical electrostatic voltages generated by different activities.

Typical Electrostatic Voltages			
	Relative Humidity		
Event	**10%**	**40%**	**55%**
Walking across carpet	35,000 V	15,000 V	7,500 V
Walking across vinyl floor	12,000 V	5,000 V	3,000 V
Motions of bench worker	6,000 V	800 V	400 V
Removing DIPS from plastic tubes	2,000 V	700 V	400 V
Removing DIPS from vinyl trays	11,500 V	4,000 V	2,000 V
Removing DIPS from Styrofoam	14,500 V	5,000 V	3,500 V
Removing bubble pack from PCBs	26,000 V	20,000 V	7,000 V
Packing PCBs in foam-lined box	21,000 V	11,000 V	5,000 V
NOTE: 700 volts can degrade a product.			

Top

Preventing Electrostatic Damage to Equipment

Many electronic components are sensitive to ESD. Circuitry design and structure determine the degree of sensitivity. The following proper packaging and grounding precautions are necessary to prevent damage:

- Protect all electrostatic parts and assemblies with conductive or approved containers or packaging.
- Keep electrostatic sensitive parts in their containers until they arrive at static-free stations.
- Place items on a grounded surface before removing them from their container.
- Always be properly grounded when touching a sensitive component or assembly.
- Place reusable electronic-sensitive parts from assemblies in protective packaging or conductive foam.
- Use transporters and conveyors made of antistatic belts and metal roller bushings. Mechanized equipment used for moving materials must be wired to ground and proper materials selected to avoid static charging. When grounding is not possible, use an ionizer to dissipate electric charges.

The accompanying table shows typical static-shielding protection levels afforded by different protective packaging materials.

Static-Shielding Protection Levels	
Method	**Voltages**
Antistatic Plastic	1,500
Carbon-Loaded Plastic	7,500
Metallized Laminate	15,000

Top

Preventing Damage to Drives

To prevent static damage to hard drives, use the following precautions:

- Handle drives gently, using static-guarding techniques.
- Store drives in the original shipping containers.
- Avoid dropping drives from any height onto any surface.
- Handle drives on surfaces that have at least 1 inch of shock-proof foam.
- Always place drives PCB-assembly side down on the foam.

Top

Grounding Methods

The method for grounding must include a wrist strap or a foot strap at a grounded workstation. When seated, wear a wrist strap connected to a grounded system. When standing, use foot straps and a grounded floor mat.

Top

Grounding Workstations

To prevent static damage at the workstation, use the following precautions:

- Cover the workstation with approved static-dissipative material.
- Provide a wrist strap connected to the work surface and properly grounded tools and equipment.
- Use static-dissipative mats, heel straps, or air ionizers to give added protection.
- Handle electrostatic sensitive components, parts, and assemblies by the case or PCB laminate. Handle them only at static-free workstations.
- Avoid contact with pins, leads, or circuitry.
- Turn off power and input signals before inserting and removing connectors or test equipment.
- Use fixtures made of static-safe materials when fixtures must directly contact dissipative surfaces.
- Keep work area free of nonconductive materials such as ordinary plastic assembly aids and Styrofoam.
- Use field service tools that are conductive, such as cutters, screwdrivers, vacuums.
- Use a portable field service kit with a static-dissipative vinyl pouch that folds out of a work mat. Also use a wrist strap and a ground cord for the work surface. Ground the cord to the chassis of the equipment undergoing test or repair.

Top

Grounding Equipment

Use the following equipment to prevent static electricity damage to the equipment:

- Wrist straps are flexible straps with a minimum of 1 mega ohm ± 10% resistance to the ground cords. To provide proper ground, a strap must be worn snug against the skin. On grounded mats without banana-plug connectors, connect a wrist strap with alligator clips.
- Heelstraps/toestraps/bootstraps can be used at standing workstations and are compatible with most types of boots and shoes. On conductive floors or dissipative floor mats, use them on both feet with a minimum of 1 mega ohm resistance between operator and ground. To be effective, the conductive strips must be worn in contact with the skin.

Top

Recommended Materials and Equipment

Other materials and equipment that are recommended for use in preventing static electricity include:

- Antistatic tape
- Antistatic smocks, aprons, or sleeve protectors
- Conductive bins, and other assembly or soldering aids
- Conductive foam
- Conductive tabletop workstations with ground cord of 1 mega ohm of resistance
- Static-dissipative table or floor mats with hard tie to ground
- Field service kits
- Static awareness labels
- Wrist straps and footwear straps providing 1 mega ohm (±10%) resistance
- Material-handling packages
- Conductive plastic bags
- Conductive plastic tubes
- Conductive tote boxes
- Metal tote boxes
- Opaque shielding bags
- Transparent, metallized shielding bags
- Transparent shielding tubes

Top

Tool Requirements

- Torx T-8, T-10, and T-15 screwdrivers
- Needle-nose pliers
- Flat-blade screwdriver
- Diagnostics software

Top

Screws

The screws used in these products are not interchangeable. If an incorrect screw is used during the reassembly process, it could cause damage to the unit. Compaq strongly recommends that all screws removed during the disassembly process be kept with the part that was removed, then returned to their proper locations.

IMPORTANT: As each subassembly is removed from the computer, it should be placed away from the work area to prevent damage.

Top

Cables and Connectors

Most cables used throughout the unit are ribbon cables. These cables must be handled with extreme care to avoid damage.

Apply only the tension required to seat or unseat the cables during insertion or removal from the connector. Handle cables by the connector whenever possible. In all cases, avoid bending, twisting, or tearing the cables, and ensure that cables are placed in such a way that they cannot be caught or snagged by parts being removed or replaced.

CAUTION: When servicing these computers, ensure that cables are placed in their proper location during the reassembly process. Improper cable placement can cause severe damage to the unit.

Optical Drive

Digital Creativity Imaging Center

3.5-Inch Hard Drive

Zip Drive

Diskette Drive

Top

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Jumper and Switch Information

Jumper & Switch Information
7800 and 5900T Models with Pentium III System Board
Mass Storage
3.5-Inch Hard Drive
5.25-Inch Hard Drive
DVD Drive
CD Drive

This section contains jumper and switch information for system board jumpers, system I/O board connectors, and Mass Storage drives.

Click on a selection on the left navigation bar for jumper and switch information.

Specifications

- Specifications
- System Specifications
- Video Memory
- System Interrupts
- System I/O
- System Memory
- System DMA
- Power Supply
- Diskette Drive
- DVD Drive
- IDE Hard Drives
- Mouse
- Fax/Modem
- CD-RW Drive

Compaq Presario 7800 Series Personal Computer specifications are listed in the following tables. Select the specification you are interested in from the navigation bar in left column.

System Specifications		
	U. S.	Outside U. S.
Dimensions		
Height	19.0 in	482.60 mm
Depth	20.9 in	530.86 mm
Width	8.38 in	212.73 mm
Weight	31 lb	14.09 kg
Shipping Weight		
Gross	41 lb	18.64 kg
Average Net	31 lb	14.09 kg
Input Requirements		
Nominal Line Voltage	100 to 120 VAC	220 to 240 VAC
Range Line Voltage	90 to 132 VAC	180 to 264 VAC
Line Frequency	47 to 63 Hz	47 to 63 Hz
Input Current (S)	5.2 at 90 VAC	3.6 at 180 VAC
Input Current (A)	8.0 at 90 VAC	4.0 at 180 VAC
Power (watts)		
Steady State (S)	200 W at 50° C 235 W at 25° C	200 W at 50° C 235 W at 25° C
Steady State (A)	200 W at 50° C 250 W at 25° C	200 W at 50° C 250 W at 25° C
Environmental Requirements		
Temperature		
Operating	50° to 95° F	10° to 35° C
Shipping	-4° to 140° F	-20° to 60° C
Humidity (noncondensing)		
Operating	8% to 90%	8% to 90%
Non-operating	5% to 95%	5% to 95%
Maximum Altitude (unpressurized)		
Operating	10,000 ft	3048 m
Nonoperating	30,000 ft	9144 m
Expansion Slots		5 PCI 1 AGP
*This number will increase if more bay/slots are occupied.		

Top

Diamond Stealth III S540 Video Memory		
Resolution	Color Depth (bpp)	Vertical Refresh (Hz)
640 × 480	8, 16, 32	60, 72, 75, 85, 160
800 × 600	8, 16, 32	60, 72, 75, 85, 160
1024 × 768	8, 16, 32	60, 72, 75, 85, 160
1152 × 864	8, 16, 32	75
1280 × 1024	8, 16	60, 75, 85, 100
1280 × 1024	32	60, 75, 85
1600 × 1200	8, 16	60, 75, 85
1600 × 1200	32	60
* The Compaq FP720 display supports a maximum resolution of 1024x768 and only supports the 60 Hz refresh rate. The Compaq Presario MV520 Multimedia Monitor supports a maximum resolution of 1024x768, which is displayed only at the 60 Hz refresh rate. The Compaq Presario MV720 Multimedia Monitor supports a maximum resolution of 1280x1024, which is displayed only at the 60 Hz refresh rate. The Compaq Presario MV920 Multimedia Monitor supports a maximum resolution of 1600x1200, which is displayed at up to the 75 Hz refresh rate.		

Top

System Interrupts	
Hardware IRQ	**System Function**
IRQ 0	System Timer
IRQ 1	Keyboard
IRQ 2	Programmable Interrupt Controller
IRQ 3	ACPI IRQ Holder for PCI IRQ Steering; Conexant PCI Modem Enumerator; NVIDIA GeForce 256; Creative SB Live!
IRQ 4	Communications Port (COM 1)
IRQ 5	Available
IRQ 6	Diskette Drive Controller
IRQ 7	ECP Printer Port (LPT 1)
IRQ 8	Real-Time Clock, System CMOS
IRQ 9	SCI IRQ used by ACPI bus
IRQ 10	ACPI IRQ Holder for PCI IRQ Steering; IEEE 1394 Controller
IRQ 11	ACPI IRQ Holder for PCI IRQ Steering; Accton EN1207D Series PCI Fast Ethernet Adapter
IRQ 11	VIA Tech 3038 PCI to USB Universal Host Controller
IRQ 12	PS/2 Mouse
IRQ 13	Numeric Data Processor
IRQ 14	Primary IDE; PCI IDE Controller
IRQ 15	Secondary IDE; PCI IDE Controller

Top

Product Description

Models and Features

The following tables list Compaq Presario 7800 Series Personal Computer models and model-specific features.

Model	Processor Speed (MHz)	Memory (MB)	Hard Drive (GB)	CD/DVD	CD-RW	Video Memory (MB)	Fax/Modem
7800	PIII 500/100	64	15	40x	n/a	16	S
7800	PIII 550/100	64	15	8x/10x/12xDVD	n/a	16	S
7800	PIII 550/100	64	15	40x	n/a	16	S
7800	PIII 600/133	64	17	8x/10x/12xDVD	n/a	16	S
7800	PIII 667/133	128	20	8x/10x/12xDVD	CD-RW	16	S

CTO Options	Processor Speed (MHz)	Memory (MB)	Hard Drive (GB)	CD/DVD	CD-RW	Video Memory (MB)	Fax/Modem
	PIII 533/133	64 SDRAM	10 (5400 RPM)	40 x	8x	16 or 32	56K

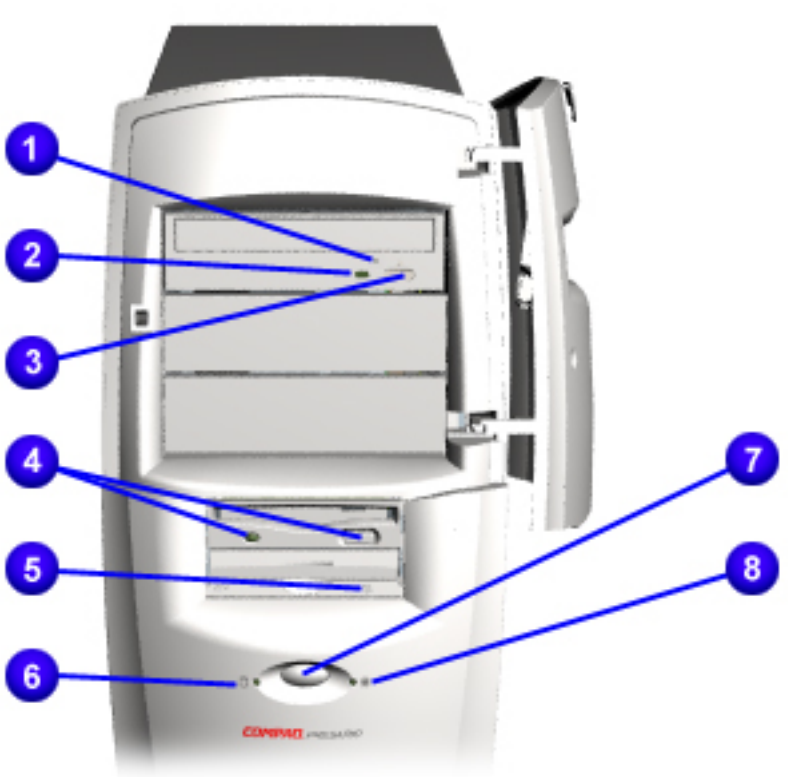
NOTE:

Modem codes:
D = 6 Mb Digital DSL/56k V.90
E = 56k V.90
S = 56k V.90 International

Back to Product Description

Product Description

CPU Controls and Lights



Description	
1	CD or DVD Manual Eject Button
2	CD or DVD Drive Activity Light
3	CD or DVD Load/Eject Button
4	Diskette Drive Eject Button and Drive Activity Light
5	Zip Drive Eject Button and Activity Light*
6	Hard Drive Activity Light
7	Power Button
8	Power Status Light

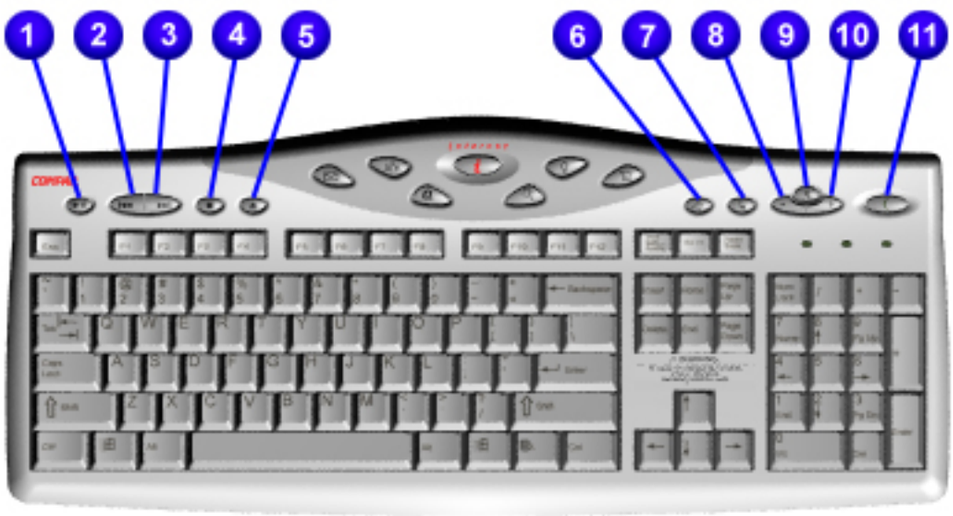
* On select models

Back to Product Description

Product Description

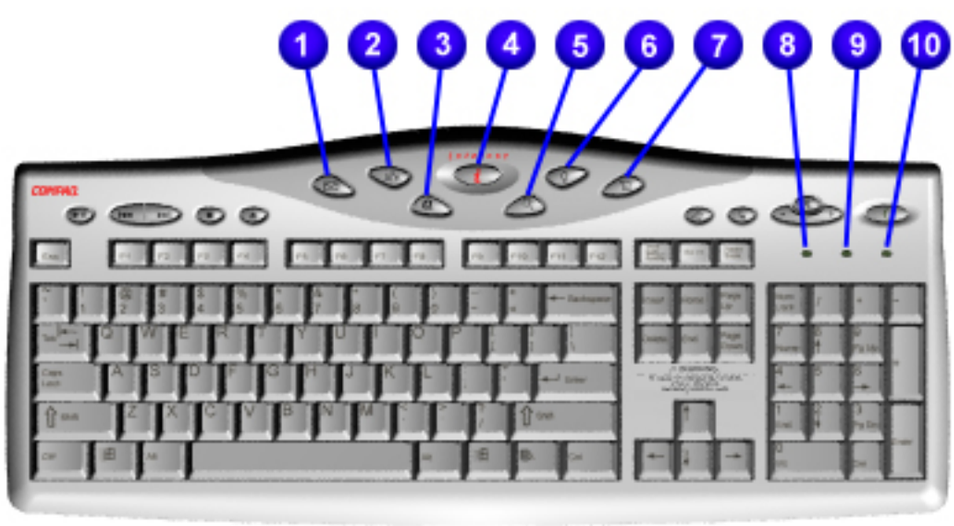
Easy Access Internet Keyboard

Easy Access Buttons | Internet Suite Buttons and Keyboard Lights



Easy Access Buttons	
1	Play/Pause
2	Rewind/Previous track
3	Fast forward/Next track
4	Stop
5	Eject
6	Print
7	Launch favorite application
8	Volume down
9	Mute
10	Volume up
11	Sleep

Top



Internet Suite Buttons and Keyboard Lights	
1	Instant E-Mail
2	Community
3	My Presario
4	Instant Internet
5	Instant Search
6	Online Marketplace
7	Retail Central
8	Number Lock Light
9	Caps Lock Light
10	Scroll Lock Light

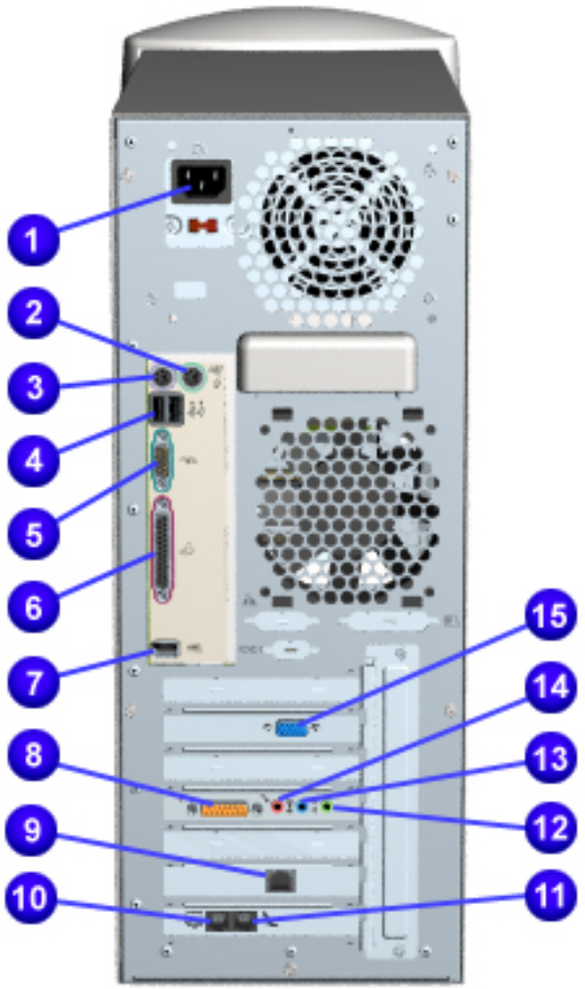
Top

Back to Product Description

Product Description

CPU Back Connectors

Connector Pins



1	Power Connector
2	Scroll Mouse
3	Keyboard
4	Dual USB
5	Serial Port
6	Parallel Port
7	IEEE 1394 Connector
8	Game Port
9	Networking Interface Connector
10	Telephone line to wall outlet
11	Telephone line to telephone
12	Audio Line Out
13	Audio Line In
14	Microphone
15	SVGA Monitor Port

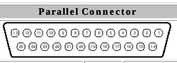
Back to Product Description

Parallel
Serial
Universal Serial Bus (USB)
Keyboard
Mouse
VGA Monitor
MIDI/Joystick
Line-in
Speaker/Headphone Out
Microphone
Phone Line to Wall
Phone Line to Phone
DVD-Drive Data Cable
Modem

Connector Pin Assignments

This section contains the connector pin assignments for the Presario 7800 series of personal computers.

Parallel Connector



Pin	Signal	Pin	Signal
1	Strobe*	10	Acknowledge*
2	Data Bit 0	11	Busy
3	Data Bit 1	12	Paper Out
4	Data Bit 2	13	Select
5	Data Bit 3	14	Auto Linefeed*
6	Data Bit 4	15	Error*
7	Data Bit 5	16	Initialize Printer*
8	Data Bit 6	17	Select In*
9	Data Bit 7	18-25	Signal Ground

* = Active low

Back to Top

Serial Connector

Connector	Pin	Signal
	1	Carrier Detect
	2	Receive Data
	3	Transmit Data
	4	Data Terminal Ready
	5	Signal Ground
	6	Data Set Ready
	7	Ready to Send
	8	Clear to Send
	9	Ring Indicator

Universal Serial Bus

Connector	Pin	Signal
	1	- Data
	2	+Data
	3	Ground
	4	+5 VDC

Keyboard

Connector	Pin	Signal
	1	Data
	2	Unused
	3	Ground
	4	+5 VDC
	5	Clock
	6	Unused

Mouse

Connector	Pin	Signal
	1	Data
	2	Unused
	3	Ground
	4	+5 VDC
	5	Clock
	6	Unused

Back to Top

VGA Monitor

Connector	Pin	Signal
	1	Red Analog
	2	Green Analog
	3	Blue Analog
	4	Volume Up
	5	Ground
	6	Ground Analog
	7	Ground Analog
	8	Ground Analog
	9	+5 VDC
	10	Ground
	11	Volume Down
	12	DDC Data
	13	Horizontal Sync
	14	Vertical Sync
	15	DDC Clock

MIDI/Joystick

Connector	Pin	Signal
Ext13.gif (3492 bytes)	1	+5 VDC
	2	Fire A (1)
	3	X-Axis (1)
	4	GND
	5	GND
	6	Y-Axis (1)
	7	Fire B (1)
	8	+5 VDC
	9	+5 VDC
	10	Fire A (2)
	11	X-Axis (2)
	12	MIDI Out
	13	Y-Axis (2)
	14	Fire B (2)
	15	MIDI In

Back to Top

Line In

Connector	Connector
	Stereo 1/8" Miniphone

Speaker/Headphone Out

Connector	Connector
	Stereo 1/8" Miniphone

Microphone

Connector	Connector
	Stereo 1/8" Miniphone

Phone Line to Wall Jack

Connector	Pin	Signal
ext15r.gif (1764 bytes)	1	Unused
	2	Tip
	3	Ring
	4	Unused

Phone Line to Phone

Connector	Pin	Signal
ext15r.gif (1764 bytes)	1	Unused
	2	Tip
	3	Ring
	4	Unused

Back to Top

DVD Drive Data Cable

Pin	Signal	Pin	Signal
1	RESET	21	DMARK
2	GND	22	GND
3	DD7	23	-DIOW
4	DD8	24	GND
5	DD6	25	-DIOR
6	DD9	26	GND
7	DD5	27	IORDY
8	DD10	28	SPSYNC
9	DD4	29	-DMACK
10	DD11	30	GND
11	DD3	31	INTRQ
12	DD12	32	-IOCS16
13	DD2	33	DA0
14	DD13	34	-PDIA6
15	DD1	35	DA0
16	DD14	36	DAZ
17	DD0	37	-CS1FX
18	DD15	38	-C53FX
19	GND	39	-DASP
20	(KEY)	40	GNP

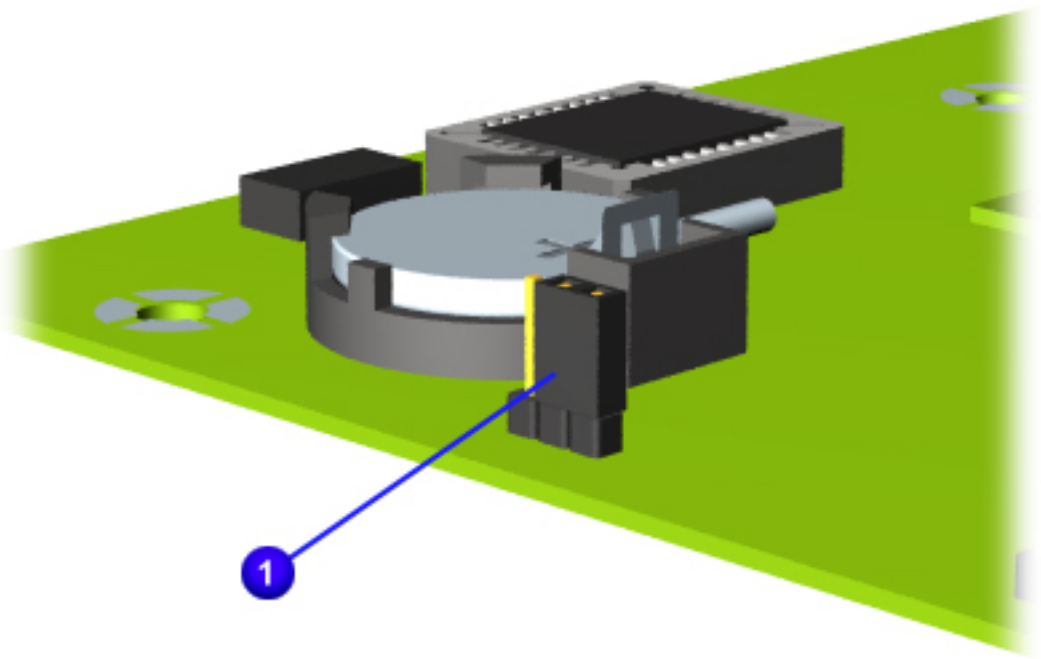
Internal Fax/Modem

Pin	Signal	Pin	Signal
1	Unused	4	Tip
2	Unused	5	Unused
3	Ring	6	Unused

Back to Top

Troubleshooting

Clearing CMOS



Password Jumper Location

If the power-on password is not known, clearing CMOS will disable the power-on password. To clear CMOS, complete the following steps:

1. Complete the preparation for disassembly.
2. Remove the chassis.
3. To disable the password, move the jumper (1) at JP1 from 1-2 to 2-3.
4. Wait for 10 seconds.
5. Move the jumper (1) at JP1 from 2-3 to 1-2.
6. Replace the chassis and perform the appropriate troubleshooting.

Back to Troubleshooting

Troubleshooting

Power-On Self-Test (POST)

POST is a series of diagnostic tests that run automatically when the system is turned on. After the computer is turned on, POST checks the following assemblies to ensure that the computer system is functioning properly:

- Keyboard
- System board
- Memory modules
- Video memory
- Diskette drive
- Hard drive
- CD (or DVD) drive
- Power supply

POST also detects the type of mass storage devices installed in the computer.

If POST finds an error in the system, an error condition is indicated by an audible or visual message.

Back to Troubleshooting

POST (Power-On Self-Test) Error Messages

An error message displays if the POST encounters a problem. This self-test will run automatically each time the system is powered on. The self-test will check all assemblies within the computer and report any errors found.

Click on the desired error code for the probable cause of the error and a recommended course of action.

Diskette Drive A or B Error	Failing Bits nnn	Fixed Disk Controller Failure
Extended RAM failed at offset nnn	Fixed Disk 0 or 1 Failure	Incorrect Drive A Type
Invalid NVRAM Media Type	Keyboard Controller Error	Keyboard Error
Operating System Not Found	Parity Check 1	Parity Check 2
Real Time Clock Error	System Battery is Dead	System BIOS Shadowed
System Cache Error	System CMOS Checksum Bad	System RAM Failed at Offset, nnn
System Timer Error	UMB Upper Limit Segment Address nnn	Video BIOS Shadowed

Diskette Drive A or B Error

Probable Cause	Recommended Action
Drive A: is present, but fails the BIOS POST diskette tests	1. Run Setup. 2. Replace the signal cables. 3. Replace the drive. Back to Top

Extended RAM failed at offset *nnn*

Probable Cause	Recommended Action
Extended memory not working or not configured properly	1. Replace the memory modules. 2. Replace the system board. Back to Top

Failing Bits *nnn*

Probable Cause	Recommended Action
nnn is a map of the bits at the RAM address which failed the memory test	1. Run Setup. 2. Replace the system board. Back to Top

Fixed Disk 0 or 1 Failure

Probable Cause	Recommended Action
Hard drive is not working or configured properly	1. Run Setup. 2. Replace the signal cable. 3. Replace the hard drive. Back to Top

Fixed Disk Controller Failure

Probable Cause	Recommended Action
Hard drive is not working or configured properly	1. Run Setup. 2. Replace the system board. Back to Top

Incorrect Drive A Type

Probable Cause	Recommended Action
Type of diskette drive A: not correctly identified	1. Run Setup. 2. Replace the diskette drive. Back to Top

Invalid NVRAM Media Type

Probable Cause	Recommended Action
Problem with NVRAM (CMOS) access	Replace the system board. Back to Top

Keyboard Controller Error

Probable Cause	Recommended Action
Keyboard, I/O keyboard controller (on system board) or mouse error	1. Replace the keyboard. 2. Replace the mouse. 3. Replace the system board. Back to Top

Keyboard Error

Probable Cause	Recommended Action
Keyboard, I/O keyboard controller (on system board) or mouse error	1. Replace the keyboard. 2. Replace the mouse. 3. Replace the system board. Back to Top

Operating System Not Found

Probable Cause	Recommended Action
Operating system cannot be located on either drive A: or C:	Run Setup. Back to Top

Parity Check 1

Probable Cause	Recommended Action
Parity error found in the system bus	1. Run Setup. 2. Replace the memory modules. 3. Replace the system board. Back to Top

Parity Check 2

Probable Cause	Recommended Action
Parity error found in the I/O bus	1. Run Setup. 2. Replace the ISA board (modem). Back to Top

Real Time Clock Error

Probable Cause	Recommended Action
Real-time clock fails BIOS test	Replace the system board. Back to Top

System Battery is Dead

Probable Cause	Recommended Action
RTC battery is dead	1. Replace the RTC battery. 2. Run Setup. Back to Top

System BIOS Shadowed

Probable Cause	Recommended Action
System BIOS copied to Shadow RAM	Replace the system board. Status message only; no action required. Back to Top

System Cache Error

Probable Cause	Recommended Action
RAM cache failed the BIOS test	Run Setup. Back to Top

System CMOS Checksum Bad

Probable Cause	Recommended Action
CMOS is corrupted or modified incorrectly	Run Setup. Back to Top

System RAM Failed at Offset, *nnn*

Probable Cause	Recommended Action
System RAM failed	Replace memory modules. Back to Top

System Timer Error

Probable Cause	Recommended Action
DMA, timers, etc.	Replace the system board. Back to Top

UMB Upper Limit Segment Address *nnn*

Probable Cause	Recommended Action
Displays the address *nnn* of the upper limit of Upper Memory Blocks, indicating released segments of the BIOS	Run Setup. Status message only; no action required. Back to Top

Video BIOS Shadowed

Probable Cause	Recommended Action
Video BIOS successfully copied to shadow RAM	Run Setup. Status message only; no action required. Back to Top

Troubleshooting

Diagnostics Software

Two diagnostic software tools are available to assist in troubleshooting your Presario product:

- Compaq Diagnostics for Windows is preinstalled on your system. To access Diagnostics for Windows, click **Start**, point to **Settings**, then select **Control Panel**, and then double-click **Compaq Diagnostics**.

- Compaq Personal Computer Diagnostics, a DOS-based tool, is available for download from the Compaq Web site at www.compaq.com.

Both tools provide general system information, verify system functionality, test the system, and identify possible defective components. Compaq Diagnostics for Windows provides specific recommended actions in the case of failure.

Troubleshooting

Troubleshooting Without Diagnostics

If you encounter some minor problems with the computer or software application, go through the following checklist for possible solutions before running any of the Diagnostic utilities:

- Is the computer connected to a working power outlet?
- Is the computer turned on and the power light illuminated?
- Are all cables connected properly and seated?
- Are all of the necessary device drivers installed?
- Is the *CONFIG.SYS* file correct?
- Is the *AUTOEXEC.BAT* file (MS-DOS) or *DOSSTART.BAT* file correct?
- Was a non-bootable diskette loaded in the diskette drive at power-up?
- Are all CMOS settings correct?

Click on a selection below to identify some quick checks for common problems.

Power | Monitor | CD Drive | USB
Diskette Drive | Hard Drive | DVD Drive | Resolving Hardware conflicts

Solving Minor Problems

Problem	Possible Solution
Computer will not turn on	Ensure that the computer is connected to a working power source.
Computer date and time display is incorrect	The real-time clock (RTC) battery may need to be replaced. See Removal and Replacement Procedures.
Computer powered off automatically	1. The unit may be in Sleep. If the amber light on the front bezel is on, then the unit is in Sleep. 2. The unit temperature may have been exceeded. Check the fan for function and blockage.

Top

Back to Troubleshooting

Solving Diskette Drive Problems

Problem	Possible Solution
Diskette drive light stays on	1. Diskette may be damaged. In Windows 95 or 98, run ScanDisk. Click Start > > Programs > > Accessories > > System Tools > > Scandisk to check for problems. 2. Diskette is incorrectly inserted. Remove the diskette and reinsert. 3. Software program may be damaged. Check the program diskettes. 4. Drive cable is not properly connected. Reconnect the drive cable.
Diskette drive cannot write to a diskette	1. Diskette is not formatted. Format the diskette. 2. Diskette is write-protected. Use another diskette that is not write-protected, or disable the write protection on the diskette. 3. Writing to the wrong drive. Check the drive letter in your path statement. 4. Not enough space is left on the diskette. Use another diskette.
Diskette drive cannot read a diskette	1. Diskette is not formatted. Format the diskette. 2. Using the wrong diskette type for the drive type. Use a diskette that is compatible with the drive. 3. Reading the wrong drive. Check the drive letter in your path statement. 4. Diskette drive has been disabled by Setup. Run Setup and enable the diskette drive.

Top

Back to Troubleshooting

Solving Monitor Problems

Problem	Possible Solution
Dim characters	1. The brightness and contrast controls are not set properly. Adjust the brightness and contrast controls. 2. Cables are not properly connected. Check that the video cable is securely connected to the video card and the monitor. 3. The RGB switch on the back of the monitor is incorrectly set. Set the RGB switch (and sync options, if this option is available) to 75 ohms, with the sync set to "external." Refer to the documentation included with the monitor.
Blank screen	1. Monitor is not turned on and the monitor light is not on. Turn on the monitor and check that the monitor light is on. 2. An energy saver feature has been enabled. Press any key or click the mouse button, and if it is set, type your password. 3. The brightness needs adjusting. Adjust the brightness control. 4. System is in Sleep mode. Press the Sleep button to wake up. 5. The cable connections are not correct. Check the cable connection from the monitor to the computer and to the electrical outlet.
Garbled characters on the screen are mixed with text	Check the monitor connection. Ensure that the monitor is capable of supporting the resolution that the computer is using. If using the DOS environment, you may need the ANSI.SYS driver. Add the ANSI.SYS driver to the *CONFIG.SYS* file by inserting the following line: DEVICE = C:\ANSI.SYS
Monitor overheats	There is not enough ventilation space for proper airflow. Leave at least 3 inches (7.6 cm) of ventilation space. Also, be sure there is nothing on top of the monitor to obstruct airflow.
Cursor will not move using the arrow keys on the keypad	The Num Lock key is on. Press the Num Lock key. The Num Lock light should not be on when you want to use the arrow keys.
Video colors are wrong	1. If you are using BNC cables, be sure that the Red, Green and Blue BNC cables are connected to the corresponding monitor connectors. 2. Be sure RGB inputs on the monitor are set to 75 ohms.
Blurry display or requested resolution cannot be set	If the graphics controller was upgraded, the correct display drivers may not be loaded. Install the display drivers on the diskette included in the upgrade kit.
The picture is broken up, or it rolls, jitters, or blinks	The monitor connections may be incomplete or the monitor may be incorrectly adjusted. 1. Be sure the monitor cable is securely connected to the computer. 2. If another monitor is in close proximity, move them apart to be sure the electromagnetic field in each monitor is not interfering with the other.

Top

Back to Troubleshooting

Solving Hard Drive Problems

Problem	Possible Solution
Hard drive error occurs	Hard disk has bad sectors or has failed. Replace hard drive.
Disk transaction problem	The directory structure is bad or there is a problem with a file. From the Windows desktop, click on the Start button. Choose Programs > > Accessories > > System Tools > > Scandisk to check for problems. If problems exist, run Scandisk and click on the "Automatically fix errors" checkbox at the bottom to correct the problems. If a large number of lost allocation units is found, click on the Start button. Choose Programs > > Accessories > > System Tools > > Disk Defragmenter.
Drive not found	Cable could be loose. Check cable connections.
Nonsystem disk message	1. The system is trying to start from a diskette that is not bootable. Remove the diskette from the diskette drive. 2. The system is trying to start from the hard drive but the hard disk has been damaged. Insert a bootable diskette into the diskette drive and restart the computer with Ctrl+Alt+Del. 3. Diskette boot has been disabled in Setup. Run Setup and enable diskette boot.
Hard drive operation seems slow	The hard disk files may be fragmented. From the Windows desktop, click on the Start button. Choose Programs > > Accessories > > System Tools > > Scandisk to check for problems. If problems exist, run Scandisk and checkmark the "Automatically fix errors" box at the bottom to correct the problems. If a large number of lost allocation units is found, click on the Start button. Choose Programs > > Accessories > > System Tools > > Disk Defragmenter.
Hard drive activity light is not on, or stays on without blinking	The hard disk files may be fragmented. From the Windows desktop, click on the Start button. Choose Programs > > Accessories > > System Tools > > Scandisk to check for problems. If problems exist, run Scandisk and checkmark the "Automatically fix errors" box at the bottom to correct the problems. If a large number of lost allocation units is found, click on the Start button. Choose Programs > > Accessories > > System Tools > > Disk Defragmenter.

Top

Back to Troubleshooting

Solving CD Drive Problems

Problem	Possible Solution
Cannot read compact disc	1. CD is not properly seated in the drive. Eject the CD, press down on the CD firmly to correctly seat it in the drive, then reload. 2. CD has been loaded upside down. Eject the CD, turn it over, then reload. 3. CD may be dirty or scratched. Load another CD.
Cannot eject CD	CD is not properly seated in the drive. Turn off the computer, insert a thin metal rod, such as a paper clip, into the emergency eject hole, then push firmly. Slowly pull the tray out from the drive until the tray is fully extended, then remove the CD.
CD drive devices are not detected or driver is not loaded	1. CD drive is not connected properly or not properly terminated. Open the computer and check to see that the drive cable is connected properly. 2. Ensure that the correct driver is installed in *CONFIG.SYS*. 3. If drive has been changed, make sure the jumper setting is set for cable select.
CD does not work in the DOS mode	Proper drivers are not loaded. Restart the system and make sure the CD drive drivers are loaded.

Top

Back to Troubleshooting

Solving DVD Drive Problems

Problem	Possible Solution
Cannot read DVD disk	1. DVD or CD is not properly seated in the drive. Eject the DVD or CD, press down on the DVD or CD firmly to correctly seat it in the drive, then reload. 2. DVD or CD disk may be dirty or scratched. Load another DVD disk.
DVD movie does not work in the DOS mode.	DVD will only operate as a CD drive. Make sure that proper drivers are loaded. Restart the system and make sure the Optical drive driver is loaded to enable the DVD drive to operate as a CD drive.
Cannot eject DVD disk	1. The DVD, diskette, or hard drive was active when attempting to eject the DVD. Wait until all drive activity ends (the CD/hard drive light and diskette drive light will go out), then try to eject the DVD. Close the application that is using the CD/DVD, then press eject. 2. The system is in the Sleep mode. Press the Power button to bring the system back to full power, then eject the DVD. **NOTE:** The system will not go into Sleep mode while playing a DVD movie. 3. DVD disk is not properly seated in the drive. Turn off the computer, insert a thin metal rod, such as a paper clip, into the emergency eject hole, then push firmly. Slowly pull the tray out from the drive until the tray is fully extended, then remove the DVD disk.
DVD drive devices are not detected; driver is not loaded	1. DVD drive is not connected properly. Open the computer and check to see that the drive cable is connected properly. 2. Ensure that the correct driver is installed in *CONFIG.SYS*. 3. If drive has been changed, make sure the jumper setting is set for cable select.
Proper drivers are not loaded.	Restart the system and make sure the DVD drive drivers are loaded.
DVD drive slow to start autorun CDs.	A DVD drive needs to identify the media descriptor file from the CD/DVD and may take some time.
DVD will not start to play like a CD	DVDs are not autoplay like a CD. Go to the Desktop and click on the DVD player icon.
DVD movie does not fill the screen	Generally, DVD media are dual-sided. One side contains the full screen format, and the other has the wide screen format. Eject the DVD movie and place the appropriate format facing up.

Top

Back to Troubleshooting

Solving for USB Problems

Problem	Possible Solution
USB device does not work with the system.	The USB device and the system should interoperate. Ensure that the correct device is installed. Check product documentation or the vendor's Web site for updated drivers.

Top

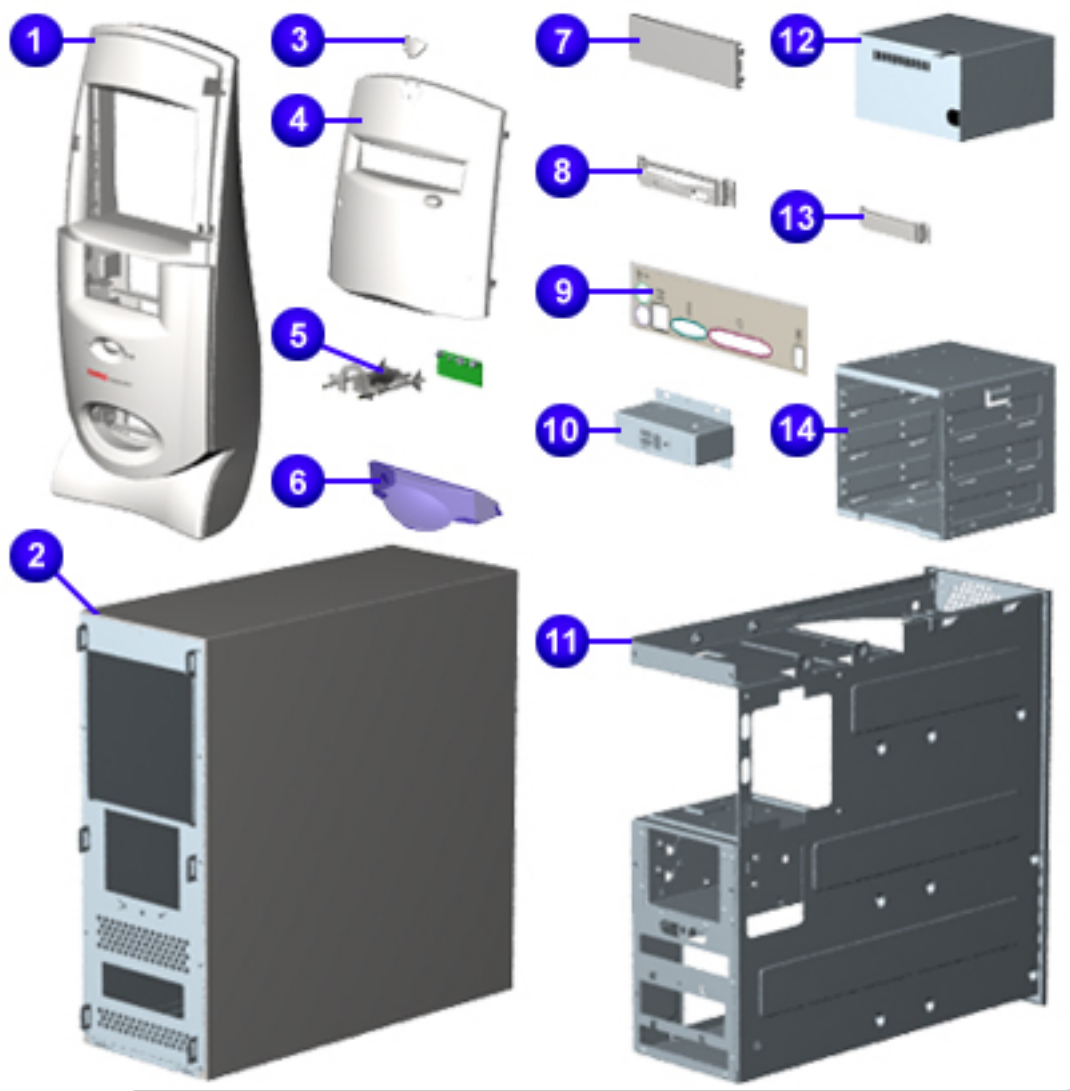
Back to Troubleshooting

Illustrated Parts

System Unit

Click on a part to find the spare part number.

- Illustrated Parts
- System Unit
- Mass Storage
- Cables
- Boards
- Fax/Modems
- Keyboards/Mouse
- Monitors
- Return Kits
- Documentation



System Unit		
Description		**Spare Part Number**
1	Front bezel assembly	159768-001
2	Cover assembly	148941-001
3	Model logo plate	166183-001
4	Door drive bay assembly	Spared with front bezel assembly
5	Button board assembly	141011-001
6	DCIC cover	102370-001
7	Drive bay bezel blank 5.25-in	Spared with front bezel assembly
8	Floppy bezel	102369-001
9	Back I/O panel cover	TBD
10	Front I/O (DCIC) with cables	174775-001
11	Cage assembly	122929-001
12	Power supply	128017-001
13	Drive bay bezel blank 3.5-in	Spared with front bezel assembly
14	Hard drive/Diskette drive/Zip drive cage	Not spared separately
15	Option card retainer cover (not shown)	174776-001

Illustrated Parts

Mass Storage Devices

Illustrated Parts
System Unit
Mass Storage
Cables
Boards
Fax/Modems
Keyboards/Mouse
Monitors
Return Kits
Documentation

3.5-in 1.44 MB Diskette Drive
136436-001

Zip Drive
135568-001

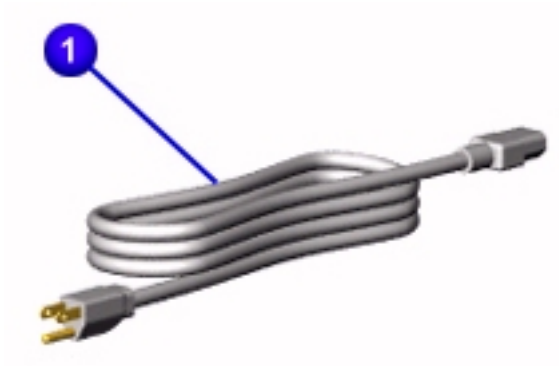
DVD-ROM Drive, 8x/10x 157784-001

3.5-in Hard Drive
10GB HD 168028-001

Illustrated Parts

Cables

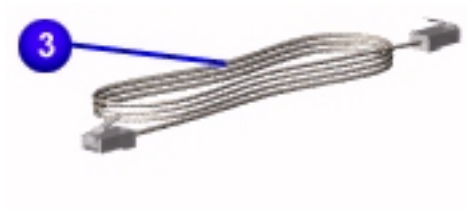
Illustrated Parts
System Unit
Mass Storage
Cables
Boards
Fax/Modems
Keyboards/Mouse
Monitors
Return Kits
Documentation



Power Cord

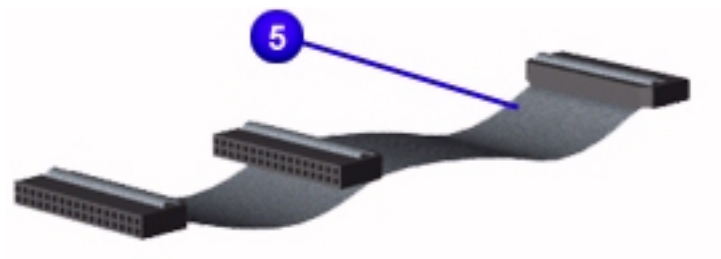
North America: 142766-001

Diskette Data Cable
327770-001



Fax/Modem Cable
Modem/Line Filter 334815-111

Audio CD-ROM Cable 149806-001



Hard Drive Single Data Cable 171288-001

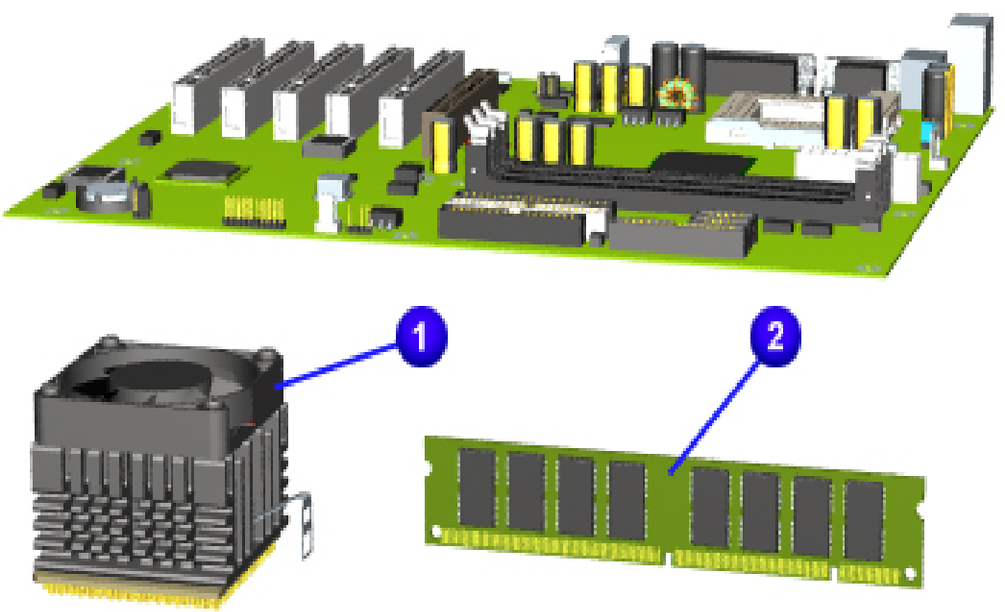
Cables	
Cables (not shown)	**Spare Part Number**
Modem Adapter Cable	340398-xxx. Click on the box to find the dash number for the modem adapter cable for a specific location. Belgium -181

Illustrated Parts

Boards for 7800 Models and 5900T

An example of the type of board used is illustrated. Board may vary slightly from the one shown.

Illustrated Parts
System Unit
Mass Storage
Cables
Boards
Fax/Modems
Keyboards
Monitors
Return Kits
Documentation



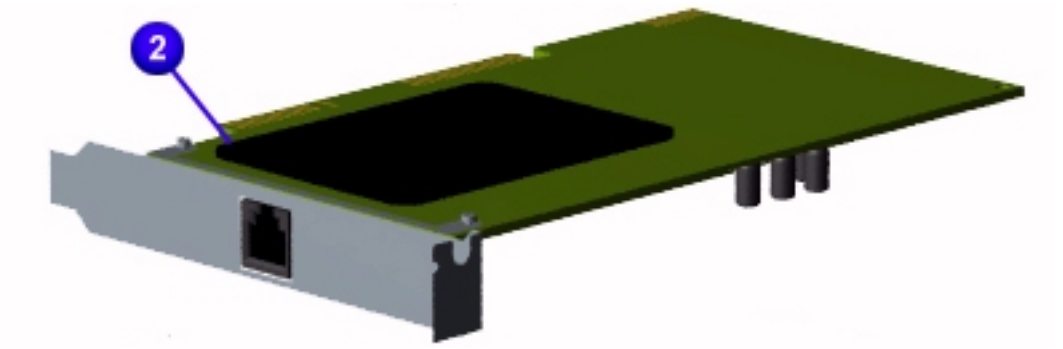
Boards		
Description		**Spare Part Number**
1	Processor, PIII 500/100 PIII 600/133 PIII 667/133	153840-001 170394-001 170395-001
2	133, 64MB SDIMM 133, 128MB SDIMM	170080-001 170081-001

Illustrated Parts

Fax/Modems

Your modem may vary slightly from those shown.

Illustrated Parts
System Unit
Mass Storage
Cables
Boards
Fax/Modems
Keyboards/Mouse
Monitors
Return Kits
Documentation



International Modem 56k V.90 - 166358-002 (S)

Illustrated Parts

Keyboards/Mouse

Illustrated Parts
System Unit
Mass Storage
Cables
Boards
Fax/Modems
Keyboards/Mouse
Monitors
Return Kits
Documentation

Keyboards/Mouse	
Description	**Spare Part Numbers**
Internet Keyboard	387084-xxx. Click on the box below to determine the dash number for the keyboard for a particular location. US 003
Logitech scroll mouse	334689-002

Illustrated Parts

Monitors

Illustrated Parts
System Unit
Mass Storage
Cables
Boards
Fax/Modems
Keyboards/Mouse
Monitors
Return Kits
Documentation

Compaq MV520 15-inch monitor

105782-001

Compaq MV720 17-inch monitor

105784-001

Compaq MV920 19-inch monitor

105786-001

Illustrated Parts

Return Kit

Illustrated Parts
System Unit
Mass Storage
Cables
Boards
Fax/Modems
Keyboards/Mouse
Monitors
Return Kit
Documentation

Return Kits	
Description	**Spare Part Number**
Return Kit for 7800 series computers - North America	128389-001

Illustrated Parts

Documentation

Illustrated Parts
System Unit
Mass Storage
Cables
Boards
Fax/Modems
Keyboards/Mouse
Monitors
Return Kits
Documentation

Documentation and Software	
Description	**Spare Part Number**
Service Quick Reference Guide (Qty 1)	162212-001
Service Quick Reference Guide (5 pack)	106854-001
Service Quick Reference, Guide Quarterly Subscription (Qty 1)	184960-001
Service Quick Reference Guide, Quarterly Subscription (5 pack)	184961-001
Quick Restore, Presario 7800-Australia	xxxxxx-01x
Quick Restore, Presario 7800-Asia Pacific	xxxxxx-37x
Quick Restore, Presario 7800- Taiwan	xxxxxx-ABx
Quick Restore, Presario 7800-New Zealand	xxxxxx-APx

Top

Preparing for Disassembly

To prepare the computer for the removal and replacement procedures, complete the following steps:

1. Remove any diskette, compact disc (CD), or Digital Versatile Disk (DVD) from the computer.
2. Turn off the computer and any peripheral devices that are connected to the computer.

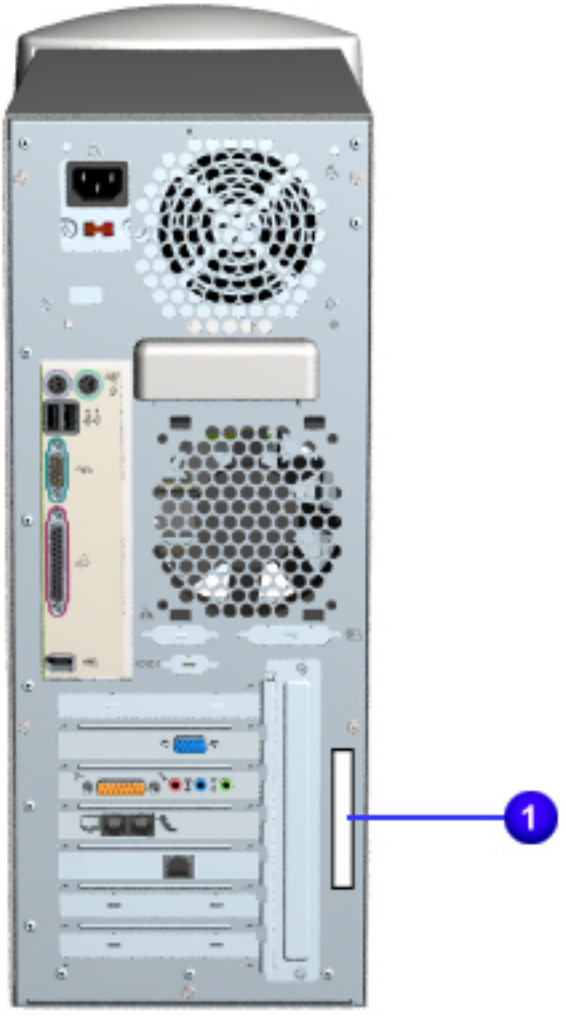
CAUTION: Hold the power button for approximately four seconds or use the shutdown command in Windows to turn off the system before you disconnect any cables.

3. Disconnect the power cord from the electrical outlet, then from the computer.
4. Disconnect all peripheral device cables from the computer.

IMPORTANT: During disassembly, label each cable as you remove it. Be sure to note the position and routing of each cable before removal.

Back to Removal and Replacement

Serial Number



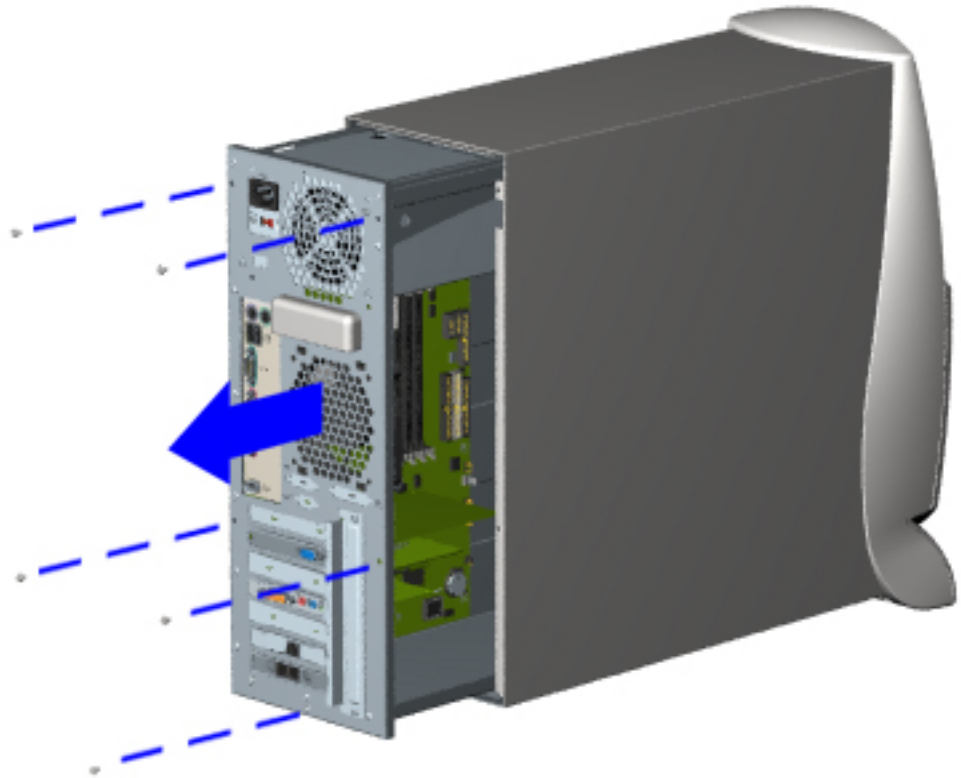
The computer serial number should be provided to Compaq whenever requesting information or ordering spare parts. The serial number is located on the back 1 and on the front of the computer, behind the drive cover (not shown).

Model may vary slightly from the one shown.

Back to Removal and Replacement

Removal and Replacement

Removal Sequence
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply



Removing the Chassis

1. Complete the preparation for disassembly procedures.
2. Remove five screws from the back of the computer.
3. Grasp the handle on back of the computer chassis, and pull back to separate from cover.

Replacement

To replace the chassis, reverse the removal procedure.

Back to Removal and Replacement

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Removal and Replacement

Removal Sequence
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply

Mass Storage Devices Index

1. Optical Drives*
2. Zip Drive
3. Diskette Drive
4. Hard Drive

* Optical Drives refer to the CD, CD-ROM, CD-RW, and DVD.

Removal and Replacement

Mass Storage Devices

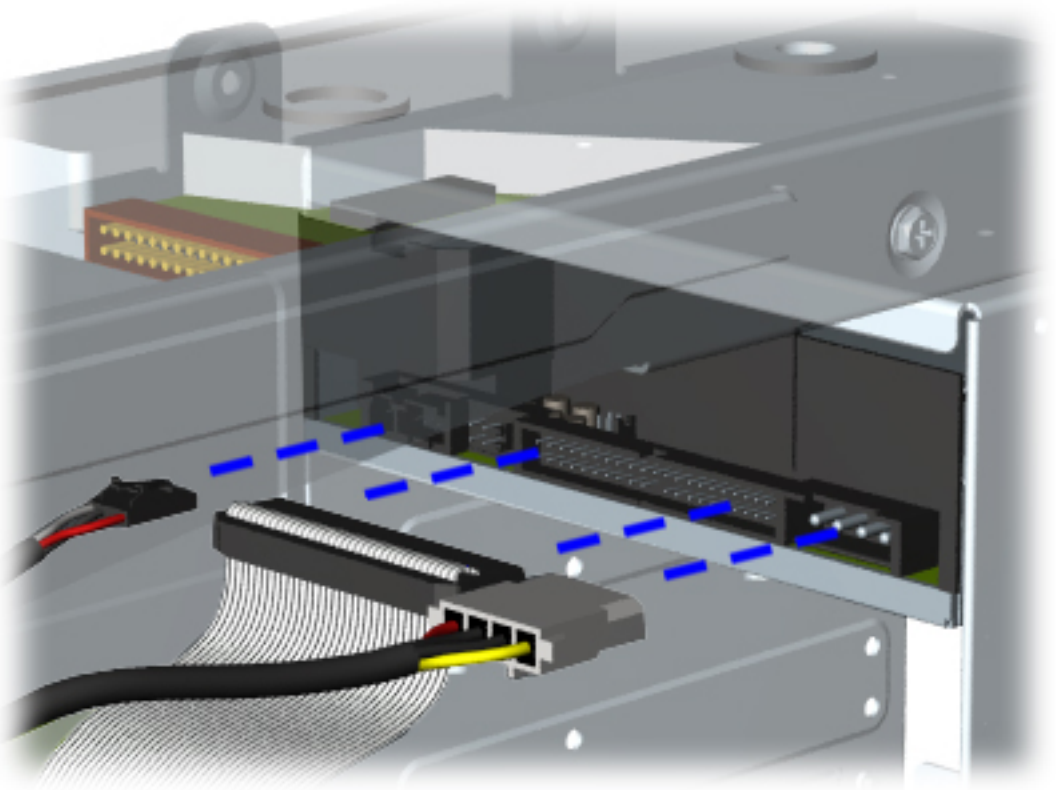
Optical Drive

Zip Drive

Diskette Drive

Hard Drive

Mass Storage Devices Index



Removing the Optical Drive

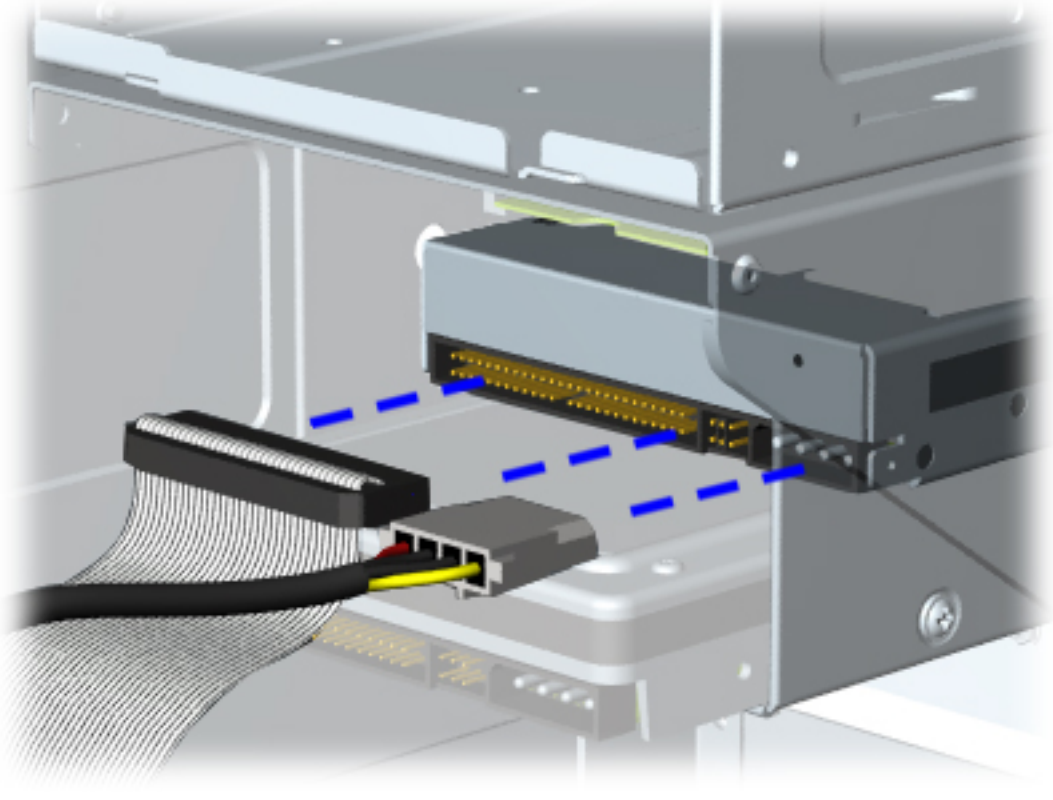
1. Complete preparation for disassembly procedures.
2. Remove the chassis.
3. Disconnect audio, data, and power cables.

Next Step

Removal and Replacement

Mass Storage Devices

- Optical Drive
- **Zip Drive**
- Diskette Drive
- Hard Drive
- Mass Storage Devices Index



Removing the Zip Drive

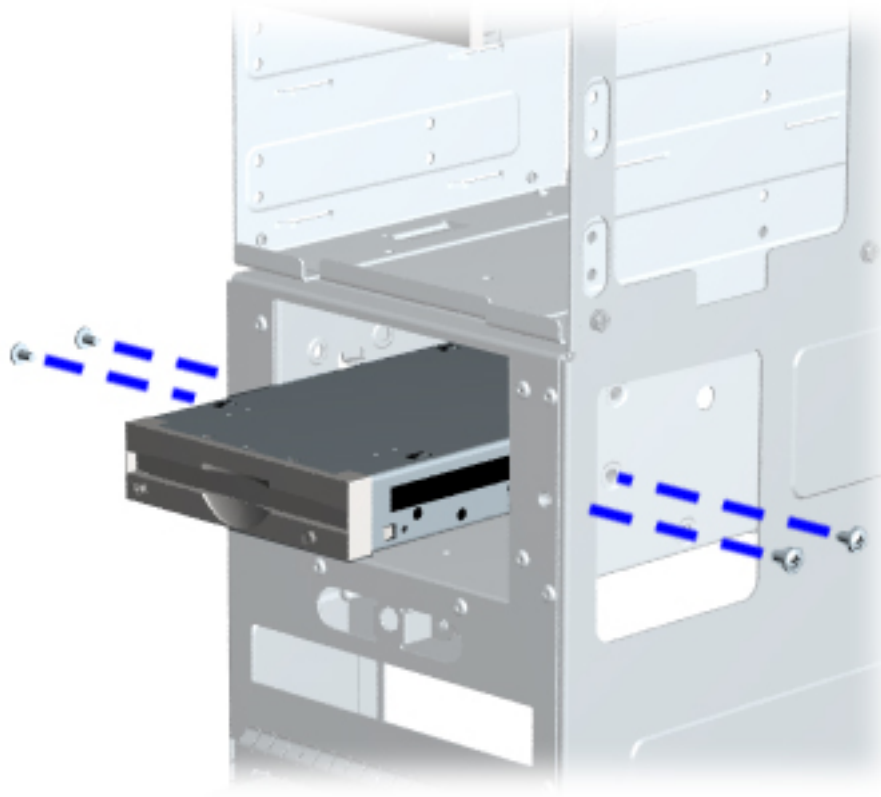
1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Disconnect the data and power cables.

Next Step

Removal and Replacement

Mass Storage Devices

- Optical Drive
- **Zip Drive**
- Diskette Drive
- Hard Drive
- Mass Storage Devices Index



Removing the Zip Drive, continued

4. Remove the two screws from the right side and the two screws from the left side of the Zip Drive.
5. Grasp the Zip Drive and remove from the drive bay.

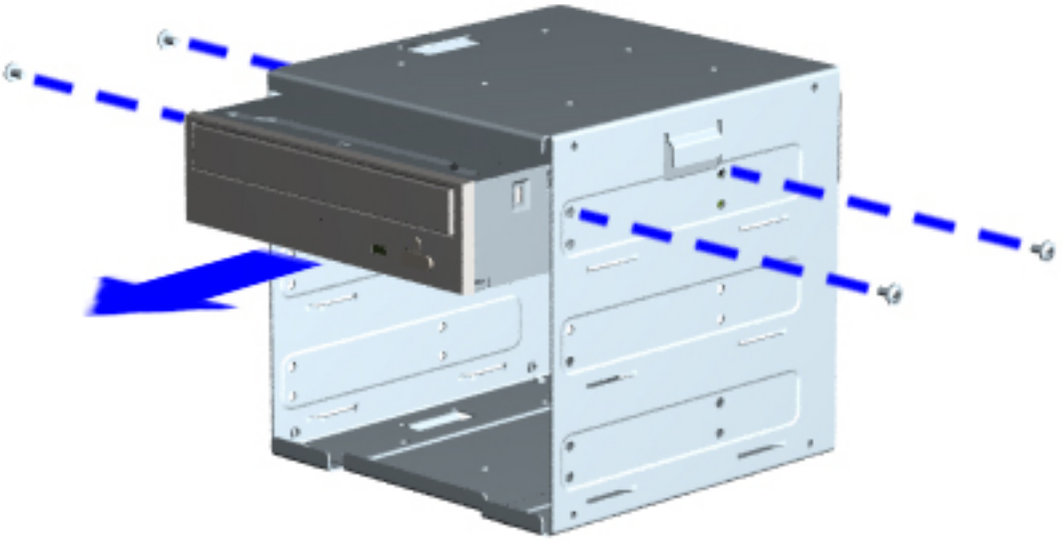
Replacement

To replace Zip Drive, reverse the removal procedure.

Return to Removal and Replacement

Removal and Replacement

Mass Storage Devices
Optical Drive
Zip Drive
Diskette Drive
Hard Drive
Mass Storage Devices Index



Removing the Optical Drive, continued

4. Remove two screws from the right side and two screws from the left side of the Optical Drive.
5. Remove the Optical Drive from the drive bay.

Replacement

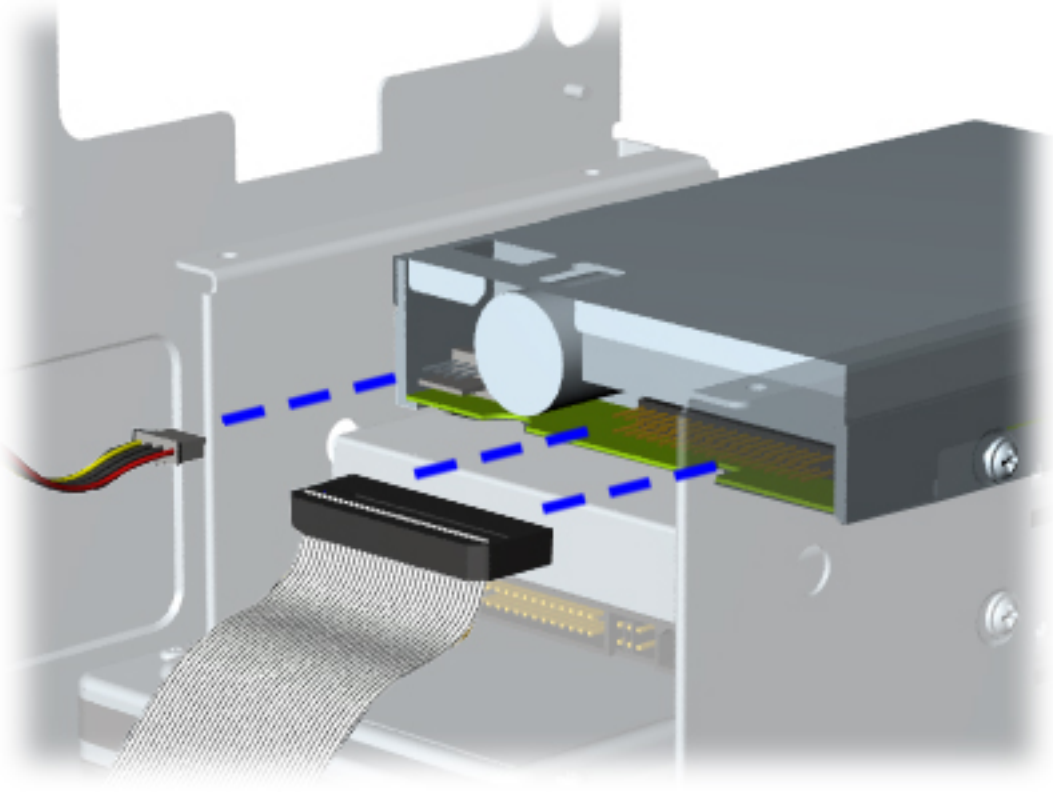
To replace the Optical Drive, reverse the removal procedure.

Return to Removal and Replacement

Removal and Replacement

Mass Storage Devices

- Optical Drive
- Zip Drive
- **Diskette Drive**
- Hard Drive
- Mass Storage Devices Index



Removing the Diskette Drive

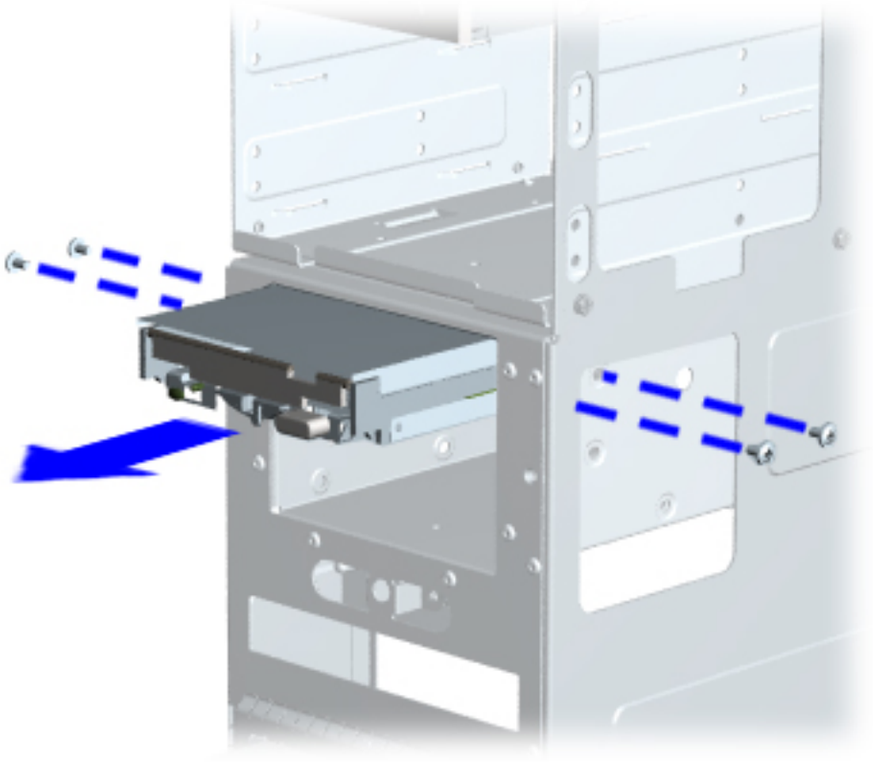
1. Complete preparation for disassembly procedures.
2. Remove chassis.
3. Disconnect the power and data cables.

Next Step

Removal and Replacement

Mass Storage Devices

- Optical Drive
- Zip Drive
- **Diskette Drive**
- Hard Drive
- Mass Storage Devices Index



Removing the Diskette Drive, continued

4. Remove the two screws from the right side and the two screws from the left side of the diskette drive bay.
5. Pull the diskette drive out of the drive bay.

Replacement

To replace the diskette drive, reverse the removal procedure.

Return to Removal and Replacement

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Removal and Replacement

Hard Drives

5.25-Inch drive

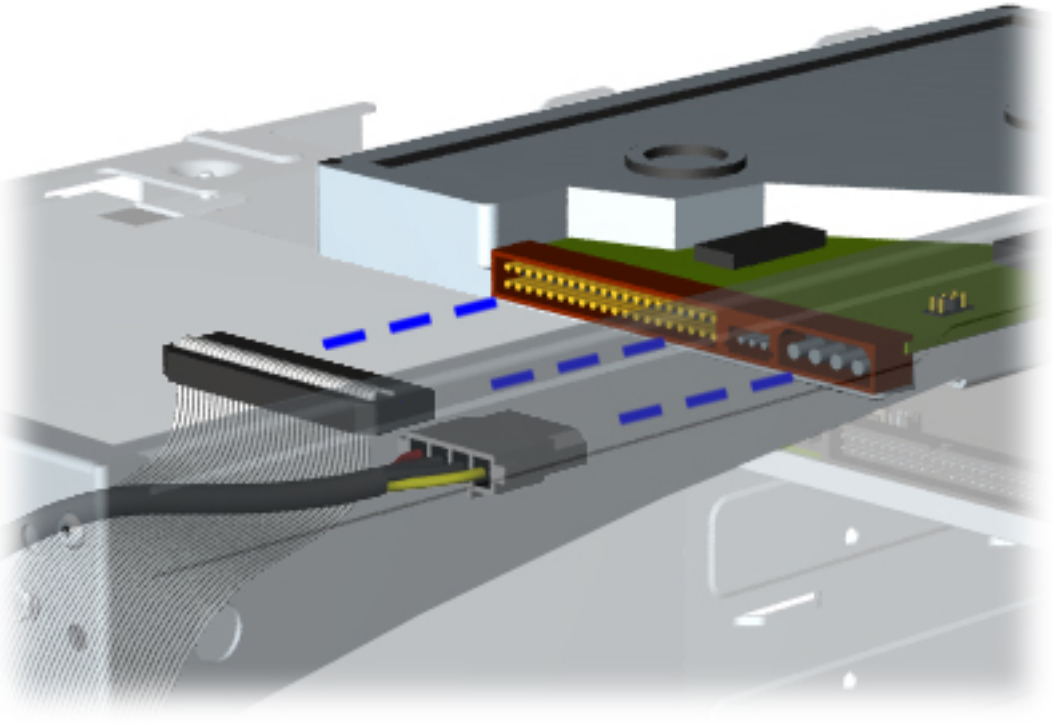
3.5-Inch drive

The Compaq Presario 7800 Series Computers may be equipped with 5.25-Inch or 3.5-Inch form factor hard drives. Refer to the disassembly instructions for the model you are servicing.

Removal and Replacement

Mass Storage Devices

- Optical Drive
- Zip Drive
- Diskette Drive
- **Hard Drive**
- Mass Storage Devices Index



Removing the 5.25-Inch Hard Drive

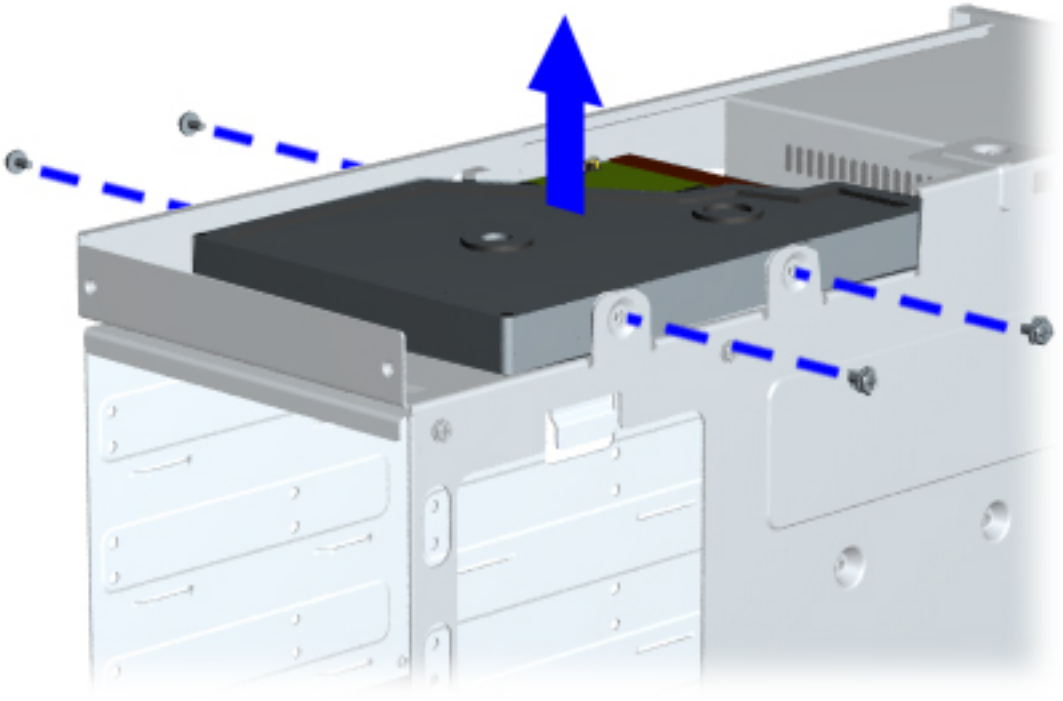
1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Disconnect the data and power cables.

Next Step

Removal and Replacement

Mass Storage Devices

- Optical Drive
- Zip Drive
- Diskette Drive
- **Hard Drive**
- Mass Storage Devices Index



Removing the 5.25-Inch Hard Drive, continued

4. Remove the two screws from the chassis and the two screws from the Hard Drive supports.
5. Slide the Hard Drive forward and lift up from the chassis.

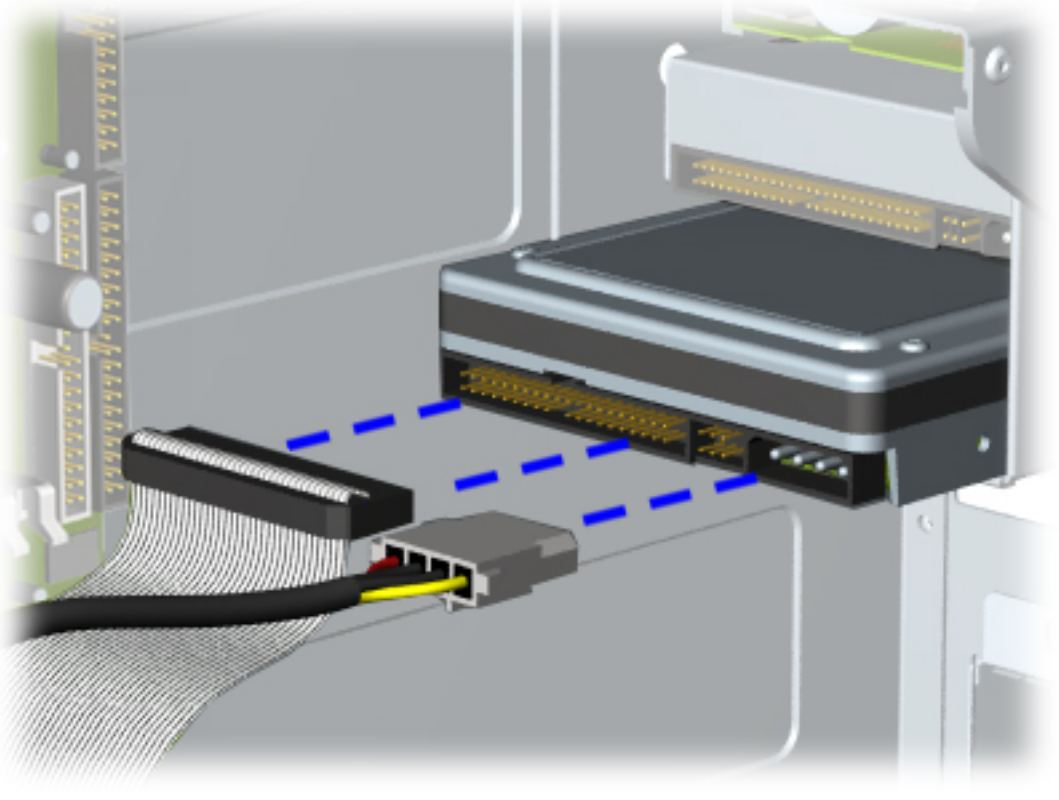
Replacement

To replace the Hard Drive, reverse the removal procedure.

Removal and Replacement

Mass Storage Devices

- Optical Drive
- Zip Drive
- Diskette Drive
- **Hard Drive**
- Mass Storage Devices Index



Removing the 3.5-Inch Hard Drive

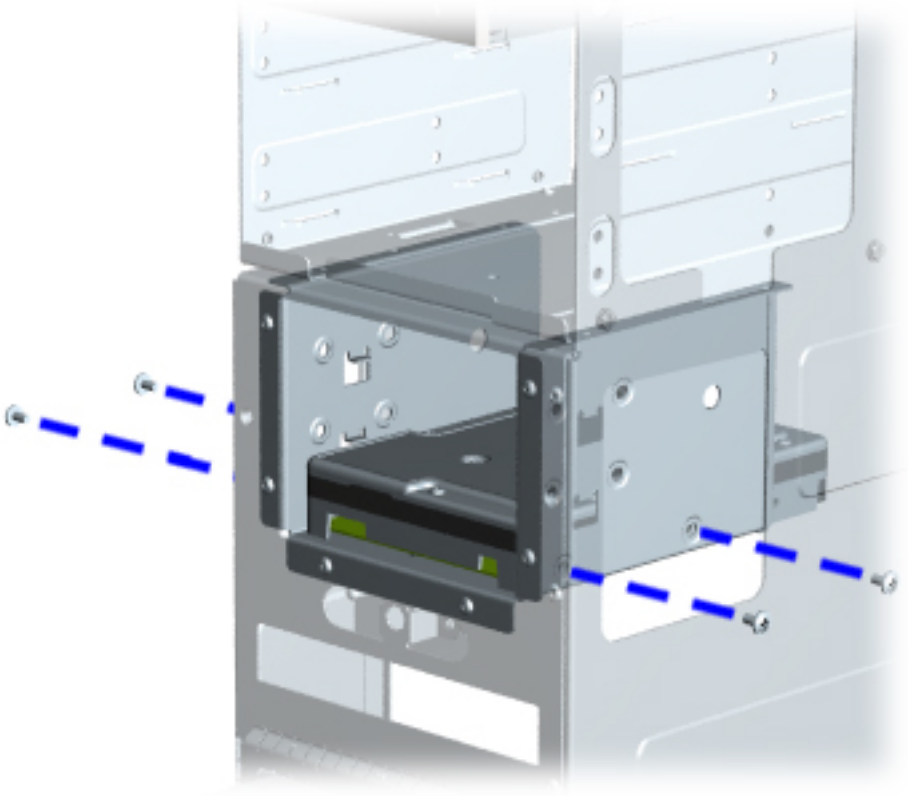
1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Disconnect the data and power cables.

Next Step

Removal and Replacement

Mass Storage Devices

- Optical Drive
- Zip Drive
- Diskette Drive
- **Hard Drive**
- Mass Storage Devices Index



Removing the 3.5-Inch Hard Drive, continued

4. Remove the two screws from the right side and the two screws from the left side of the Hard Drive supports.
5. Slide Hard Drive inward to remove from chassis.

Replacement

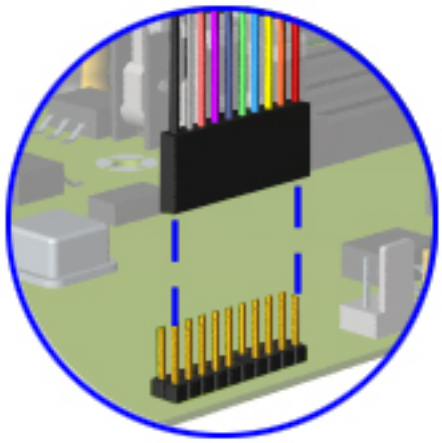
To replace the Hard Drive, reverse the removal procedure.

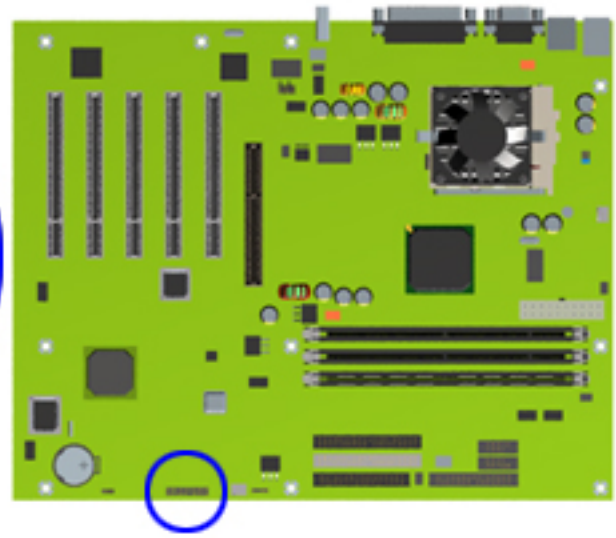
Return to Removal and Replacement

Removal and Replacement

Removal Sequence

- Chassis
- Mass Storage Devices
- **Button Board**
- Digital Creativity Imaging Center
- Option Card Retainer
- Graphics Board
- PCI Cards
- Memory
- Processor
- RTC Battery
- System Board Cables
- System Board
- Back I/O Panel
- Power Supply





System board may vary depending on model.

Removing the Button Board

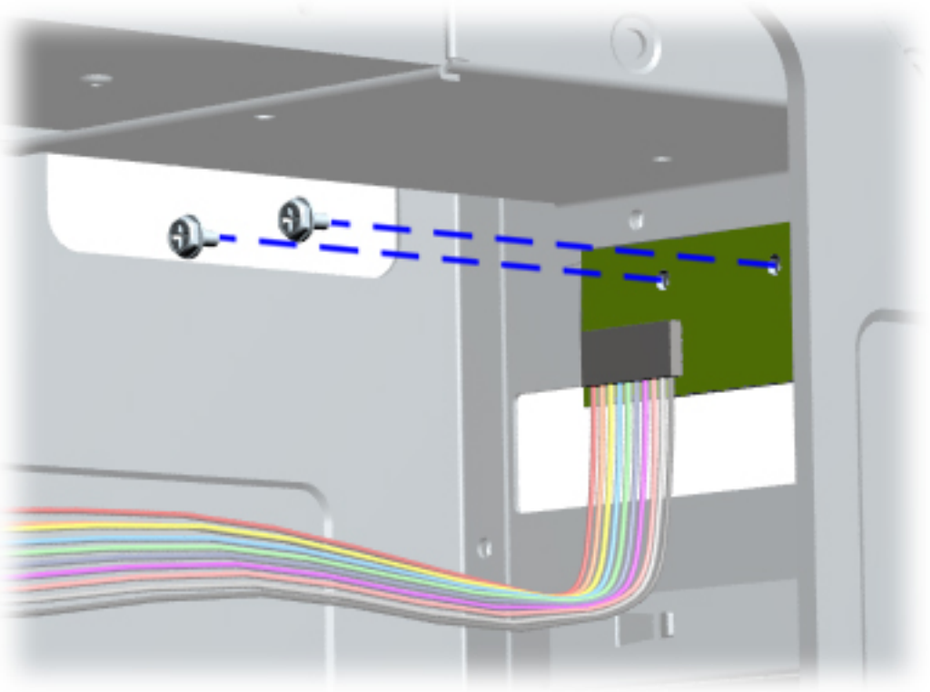
1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Disconnect button board power/data cable from the system board (J10).

Next Step

Removal and Replacement

Removal Sequence

- Chassis
- Mass Storage Devices
- **Button Board**
- Digital Creativity Imaging Center
- Option Card Retainer
- Graphics Board
- PCI Cards
- Memory
- Processor
- RTC Battery
- System Board Cables
- System Board
- Parallel Port
- Back I/O Panel
- Power Supply



Removing the Button Board, continued

4. Remove the two screws from button board assembly and remove assembly from back of the front bezel.

Replacement

To replace the button board, reverse the removal procedure.

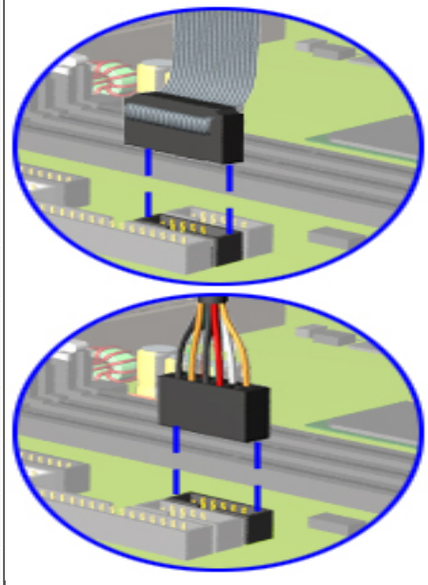
NOTE: Reconnect the power/data cable with the red wire connected to pin 1. Last two pins on left should be exposed. (See previous page for graphic).

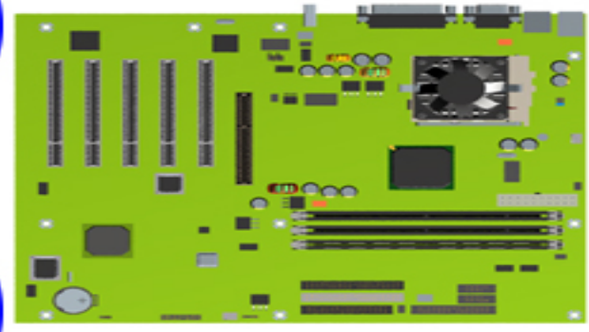
Return to Removal and Replacement

Removal and Replacement

Removal Sequence

- Chassis
- Mass Storage Devices
- Button Board
- **Digital Creativity Imaging Center**
- Option Card Retainer
- Graphics Board
- PCI Cards
- Memory
- Processor
- RTC Battery
- System Board Cables
- System Board
- Back I/O Panel
- Power Supply





System board may vary depending on model.

Removing the Digital Creativity Imaging Center (DCIC)

1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Disconnect the IEEE 1394 wire cable (JP3) and USB ribbon cable (JP4) from the system board.

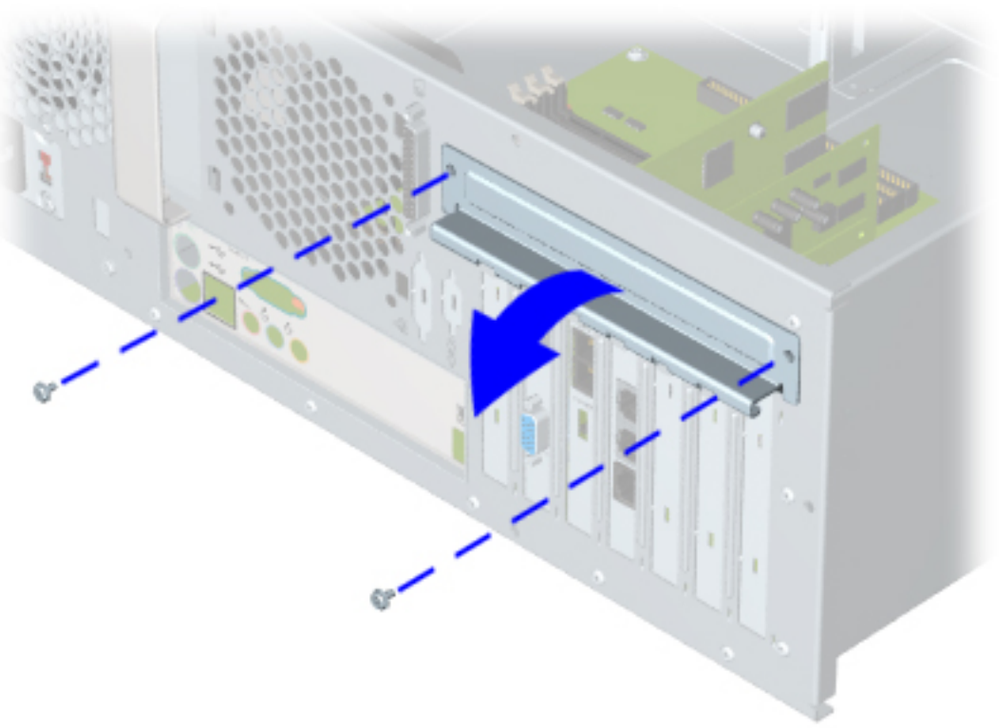
Next Step

Replacement

To replace the DCIC cables, reverse the replacement procedure.

Removal and Replacement

Removal Sequence
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply



Removing the Option Card Retainer

1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Remove the two screws from the Option Card Retainer and remove retainer from chassis.

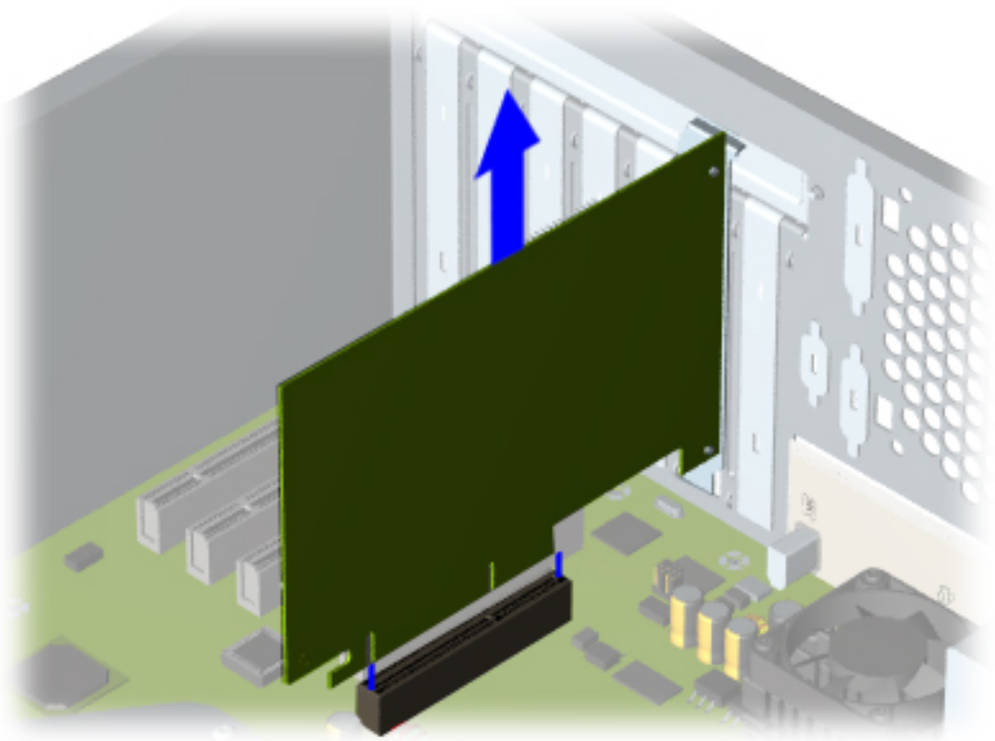
Replacement

To replace the Option Card Retainer, reverse the removal procedure.

Back to Removal and Replacement

Removal and Replacement

Removal Sequence
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply



Removing the Graphics Board

1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Remove the Option Card Retainer.
4. Pull the graphics board and bracket out and to the left to remove from the chassis.

Replacement

To replace graphics board, reverse the removal procedure.

Back to Removal and Replacement

Removal and Replacement

Removal Sequence

- Chassis
- Mass Storage Devices
- Button Board
- Digital Creativity Imaging Center
- Option Card Retainer
- Graphics Board
- **PCI Cards**
- Memory
- Processor
- RTC Battery
- System Board Cables
- System Board
- Back I/O Panel
- Power Supply

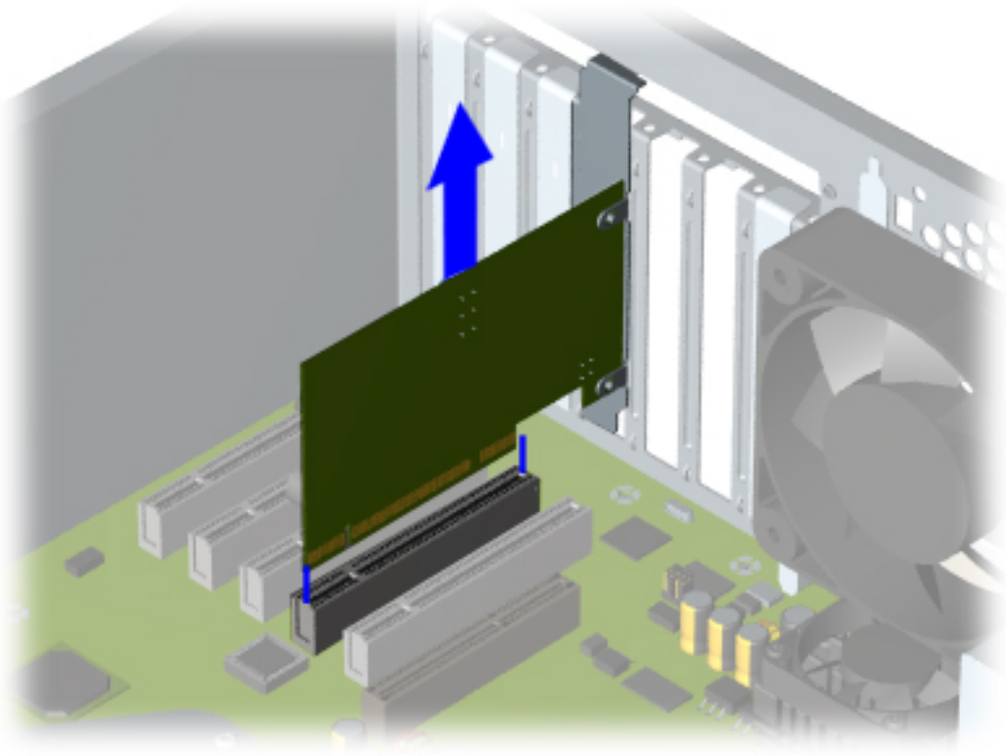


Illustration shows Fax/Modem card.

NOTE:	All PCI Cards (Fax/Modem, Audio, NIC, and Home PNA) have the same removal procedures.

Location of PCI Cards are as follows:

- Audio card in PCI slot 2
- HPN card in PCI slot 3
- NIC card in PCI slot 4
- Fax/Modem card in PCI slot 5

Removing a PCI Card

1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Remove the Option Card Retainer.
4. Pull the PCI Card out and to the left to remove from the chassis.

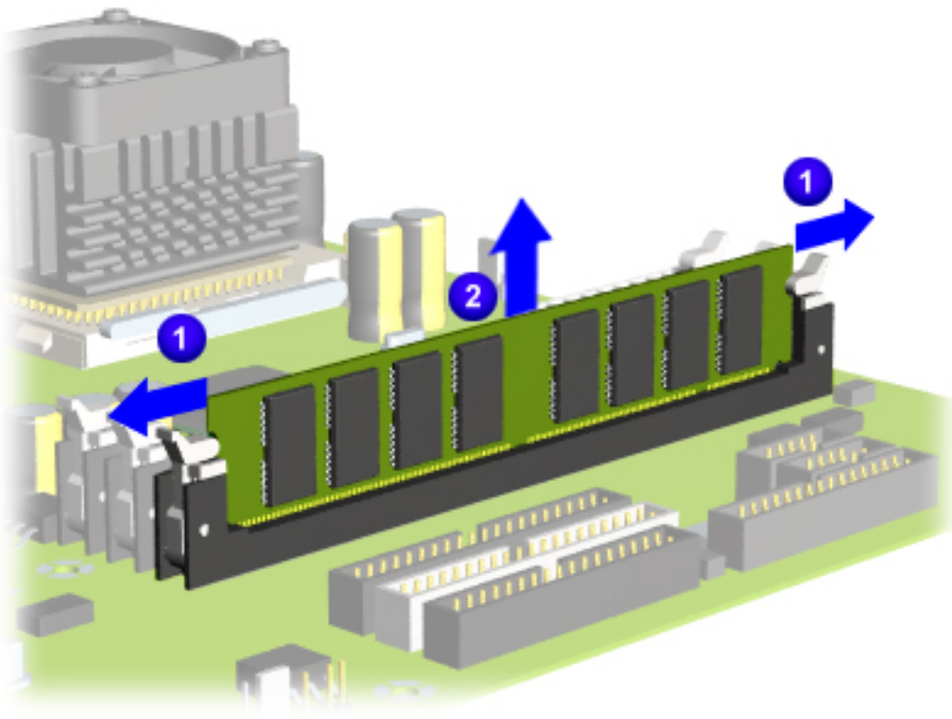
Replacement

To replace the PCI Card, reverse the replacement procedure.

Back to Removal and Replacement

Removal and Replacement

Removal Sequence
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply



Removing the Memory Module

1. Complete the preparation for disassembly procedure.
2. Remove the chassis.
3. Press outward on the release latches found on both ends of the Dual Inline Memory Module (DIMM).
4. Detach memory module from slot.

Replacement

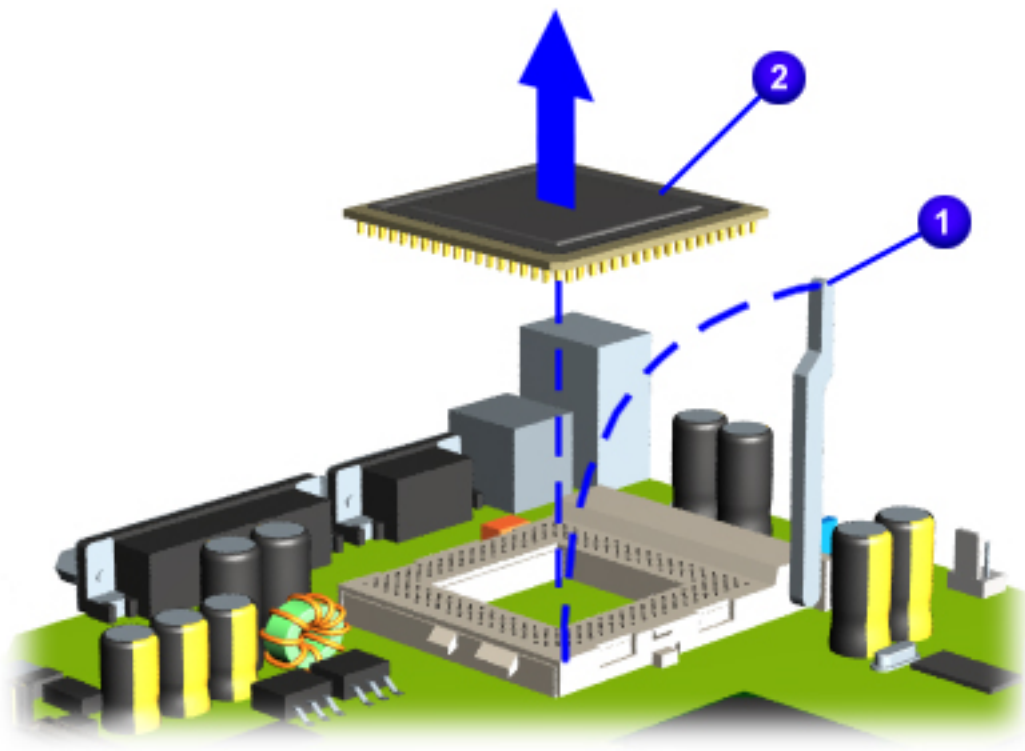
To replace memory module, reverse the removal procedure.

Back to Removal and Replacement

Removal and Replacement

Processor for 7800 Models and 5900T

Removal Sequence
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply



Processor may vary from the one shown.

Removing the Processor

1. Complete the preparation for disassembly procedures.
2. Remove the chassis.

CAUTION: The processor may still be very hot if the computer has not been running recently.

3. Disconnect heat sink fan from the system board.
4. Unlatch the heat sink clip from the socket.
5. Remove the heat sink. (**NOTE:** If the heat sink is bonded with processor, twist to remove the heat sink.)
6. Lift up the ZIF socket handle (1), remove the processor from the socket (2).

Replacement

To reinstall the processor, rub a thermal transfer crayon on the bottom of the heat sink, then reverse the steps above.

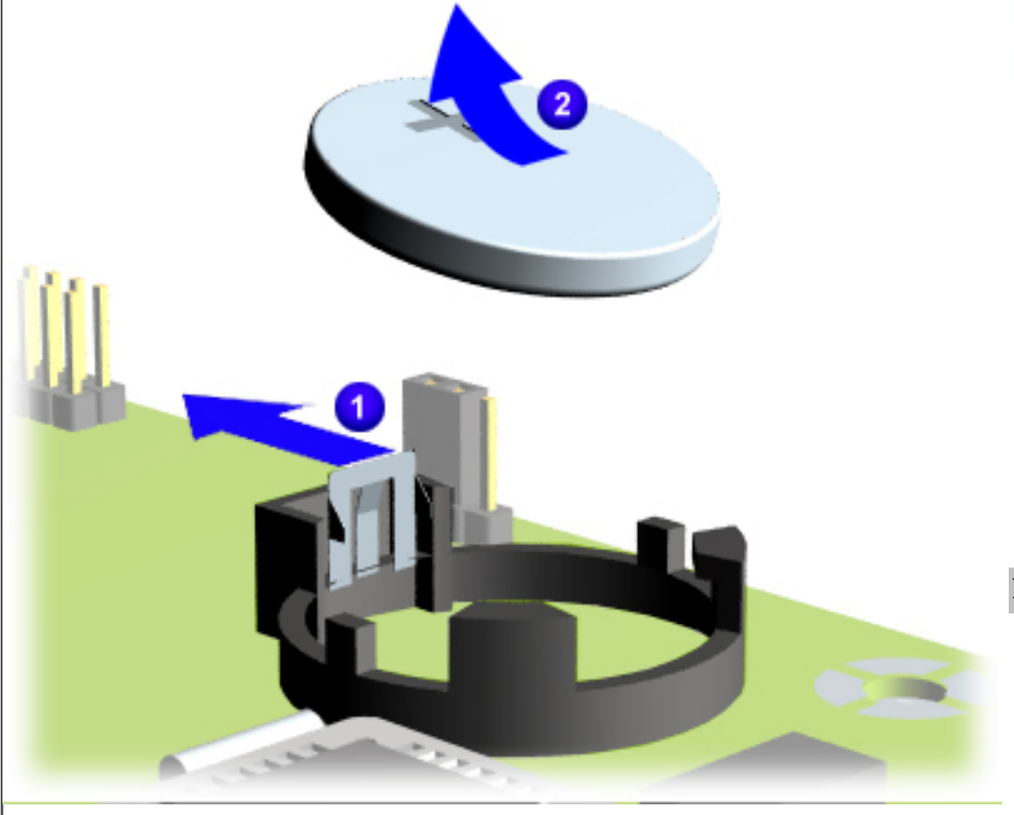
NOTE: The thermal transfer crayon replaces the thermal pad.

Back to Removal and Replacement

Removal and Replacement

Removal Sequence

- Chassis
- Mass Storage Devices
- Button Board
- Digital Creativity Imaging Center
- Option Card Retainer
- Graphics Board
- PCI Cards
- Memory
- Processor
- **RTC Battery**
- System Board Cables
- System Board
- Back I/O Panel
- Power Supply



Removing the RTC Battery

1. Perform the preparation for disassembly procedure.
2. Remove the chassis.
3. Push out the socket lever 1 and slide the RTC battery out of the socket 2.

Replacement

To replace the RTC battery, reverse the removal procedure.

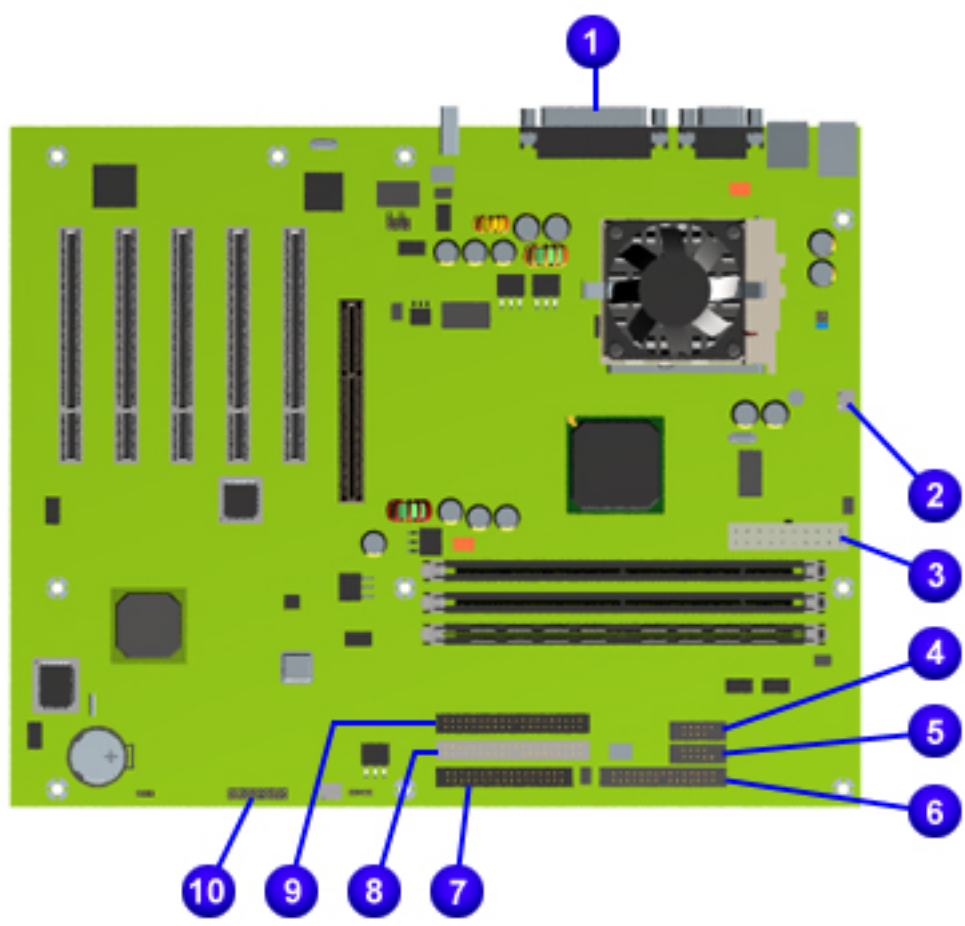
WARNING: The clock/CMOS lithium battery may explode if mistreated.
Do not abuse. Use only replacement batteries supplied by Compaq Computer Corporation.

Back to Removal and Replacement

Removal and Replacement

Processor for 7800 Models

Removal Sequence
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply



Removing the System Board Cables

1. Parallel port cable connector, J21 system board connector
2. Active heatsink cable, J15 system board connector
3. Power supply cable, J9 system board connector
4. 1394 cable, JP3 system board connector.
5. USB cable, JP4 system board connector.
6. Not used, J11 system board connector.
7. Diskette drive data cable, J14 system board connectors.
8. CD/DVD data cable, J13 system board connector.
9. Hard drive data cable, J12 system board connector.
10. Button board data cable, J10 system board connector.

Replacement

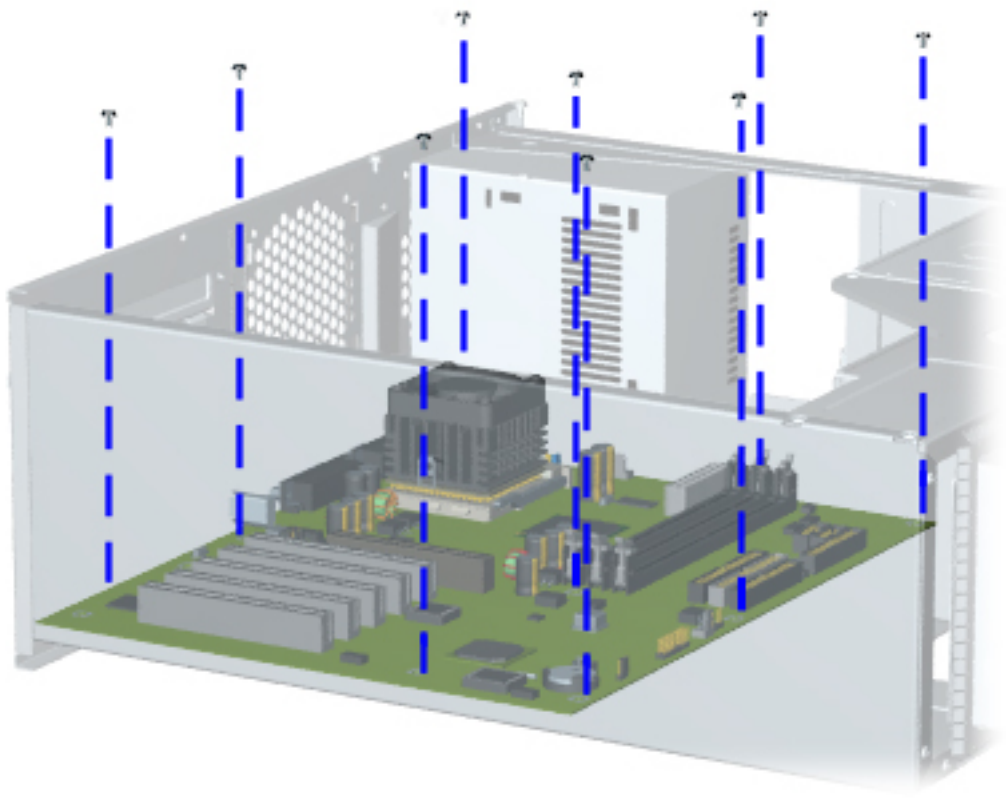
To replace the System Board Cables, reverse the removal procedure.

Back to Removal and Replacement

Removal and Replacement

Removal Sequence

- Chassis
- Mass Storage Devices
- Button Board
- Digital Creativity Imaging Center
- Option Card Retainer
- Graphics Board
- PCI Cards
- Memory
- Processor
- RTC Battery
- System Board Cables
- **System Board**
- Back I/O Panel
- Power Supply



System board may vary from the one shown.

Removing the System Board

1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Remove the Graphics Board.
4. Remove the Fax/Modem.
5. Remove Networking Interface Card (on select models only).
6. Remove the Audio Card.
7. Remove the Memory.
8. Remove the Processor.
9. Disconnect the System Board Cables.

NOTE: Be sure to remove components such as DIMMs and processor before replacing the system board.

10. Remove the nine screws from the system board.
11. Slide system board toward drive bay and lift from the computer.

Replacement

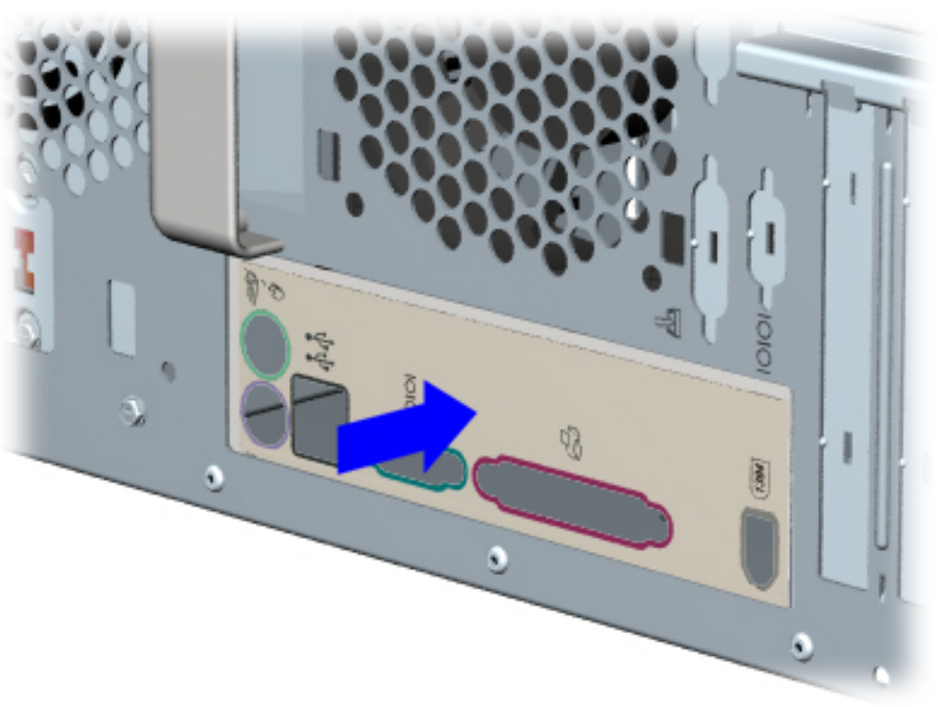
To replace the system board, reverse the removal procedure.

Back to Removal and Replacement

Removal and Replacement

Back I/O Panel may vary depending on model.

Removal Sequence
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply



Removing the Back I/O Panel

1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Remove the Graphics Board.
4. Remove the Fax/Modem.
5. Remove the Networking Interface Card (on select models only).
6. Remove the Audio Card.
7. Remove the Memory.
8. Remove the Processor.
9. Disconnect System Board Cables.
10. Remove the System Board.
11. Push the back I/O Panel into the chassis from the back of the chassis and remove.

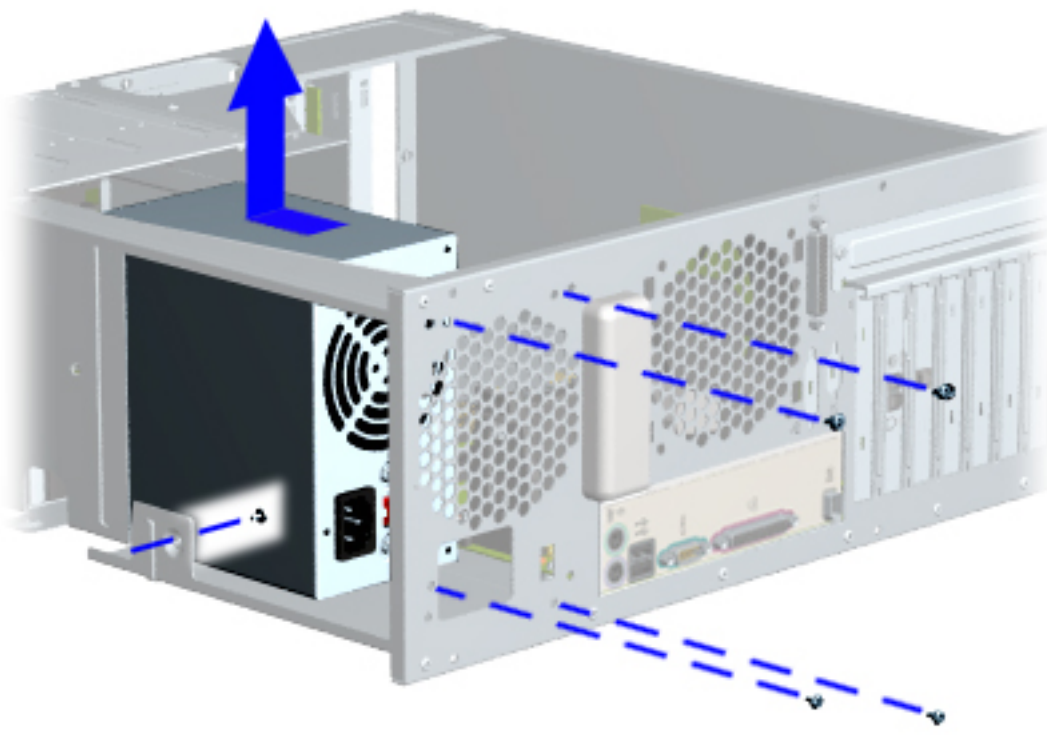
Replacement

To replace the Back I/O Panel, reverse the removal procedure.

Back to Removal and Replacement

Removal and Replacement

Removal Sequence
Chassis
Mass Storage Devices
Button Board
Digital Creativity Imaging Center
Option Card Retainer
Graphics Board
PCI Cards
Memory
Processor
RTC Battery
System Board Cables
System Board
Back I/O Panel
Power Supply



Removing the Power Supply

1. Complete the preparation for disassembly procedures.
2. Remove the chassis.
3. Remove 5.25-Inch or 3.5-Inch Hard Drive.
4. Disconnect System Board Cables.
5. Disconnect power supply cables from CD/DVD, Zip drive, Diskette and Hard Drive.
6. Remove Graphics Board.
7. Remove the Fax/Modem.
8. Remove Networking Interface Card (on select models only).
9. Remove the Audio Card.
10. Remove the Memory.
11. Remove the Processor.
12. Remove the System Board.
13. Remove the four screws from the back of the unit and one screw from the tab.
14. Slide the power supply toward front of unit and down to remove from chassis.

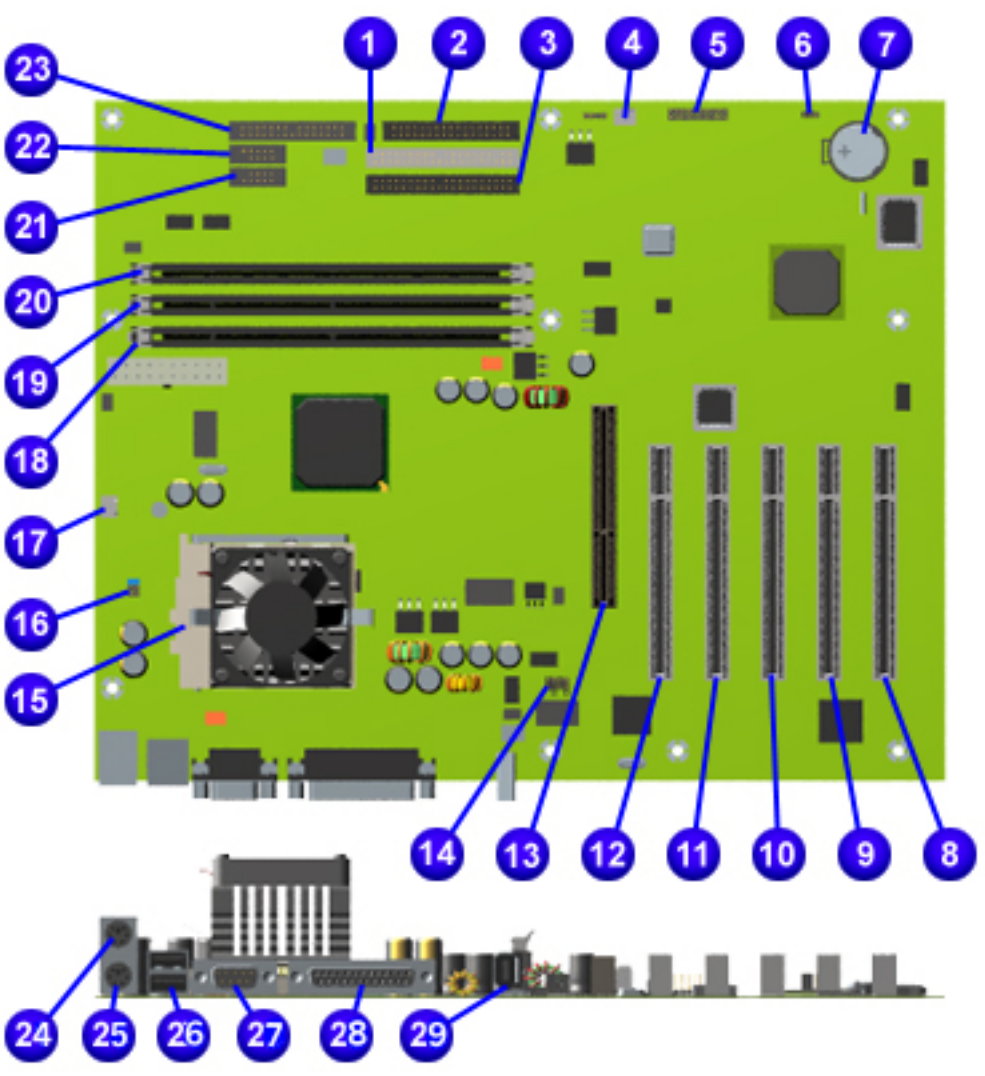
Replacement

To replace the power supply, reverse the removal procedure.

Back to Removal and Replacement

Presario 7800 and 5900T Models with Pentium III System Board

Jumper & Switch Information



Number	Function	Description	Reference Designator
1	Secondary IDE Drive	40-pin	J13
2	Diskette Drive	34-pin	J14
3	Primary IDE Drive	40-pin	J12
4	Not used		
5	Secondary fan connector		J20
6	Button Board	20-pin	J10
7	CMOS	3-pin	JP1
8	Battery Socket	Battery holder	BT1
9-13	PCI Slots	32-bit PCI connector	PCI 1 to 5
14	AGP Slot	Connector	AGP1
15	Slot 1	321-pin PGA	J18
16	Front side bus	four, 2-pin jumpers	JP5-7*
17	Heat sink fan connector	3-pin	J15
18-20	DIMM Sockets	168-pin DIMM	DIMM 1 to 3
21	IEEE 1394	10-pin	JP3
22	Front I/O panel	10-pin	JP4
23	Single front I/O panel	30-pin	J11**
24	Mouse	Miniature 6-pin	J1
25	Keyboard	Miniature 6-pin	J1
26	Back USB	Dual 4-pin	J2
27	Serial Port	DSUB 9-pin	J4
28	Parallel Port	DSUB 25-pin	J21
29	IEEE 1394 Connector	6-pin	J7
	Fan	3-pin	
	Power Supply	20-pin	J9
	Clock Multiplier	3, 2-pin	JP2

* JP7 always set to the ON position. JP5, JP6, and JP8 always set to the OFF position.

** Single front I/O panel and USB and IEEE1394 connectors are not used concurrently.

Jumper Settings

- Clearing CMOS
- Frequency Selection (JP2)

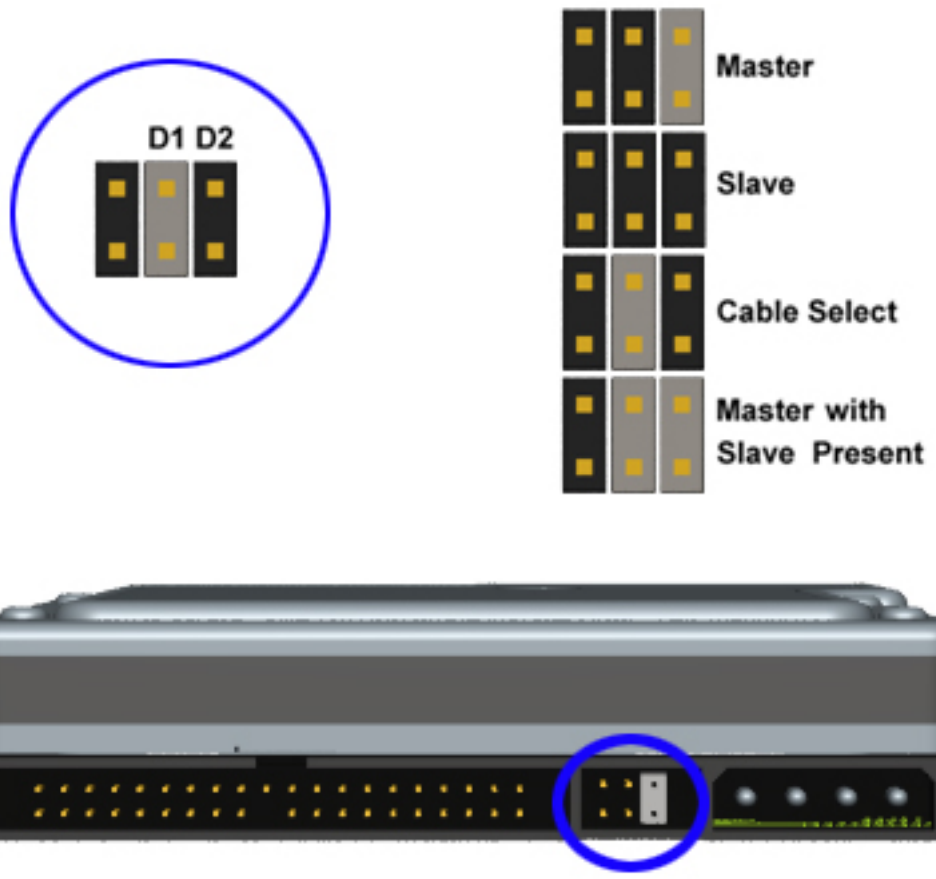
Clearing CMOS JP1	
CMOS Normal	CMOS Clear
pins 1-2	pins 2-3

Top

Frequency Selection (JP2)							
Multiplier	**Pin (1-2)**	**Pin (3-4)**	**Pin (5-6)**	**Pin (7-8)**	**FSB 66 MHz**	**FSB 100 MHz**	**FSB 133 MHz**
2	ON	ON	ON	ON	133	200	266
3	ON	OFF	ON	ON	200	300	400
4	OFF	ON	ON	ON	266	400	533
5	OFF	OFF	ON	ON	333	500	667
5/2	ON	ON	OFF	ON	166	250	333
7/2	ON	OFF	OFF	ON	233	350	466
9/2	OFF	ON	OFF	ON	300	450	600
11/2	OFF	OFF	OFF	ON	366	550	733
6	ON	ON	ON	OFF	400	600	800
7	ON	OFF	ON	OFF	466	700	933
8	OFF	ON	ON	OFF	533	800	1066
Reserved	OFF	OFF	OFF	OFF	***	***	***
13/2	ON	ON	OFF	OFF	433	650	866
15/2	ON	OFF	OFF	OFF	500	750	1000
3/2	OFF	ON	OFF	OFF	100	150	200
2	OFF	OFF	OFF	OFF	133	200	266

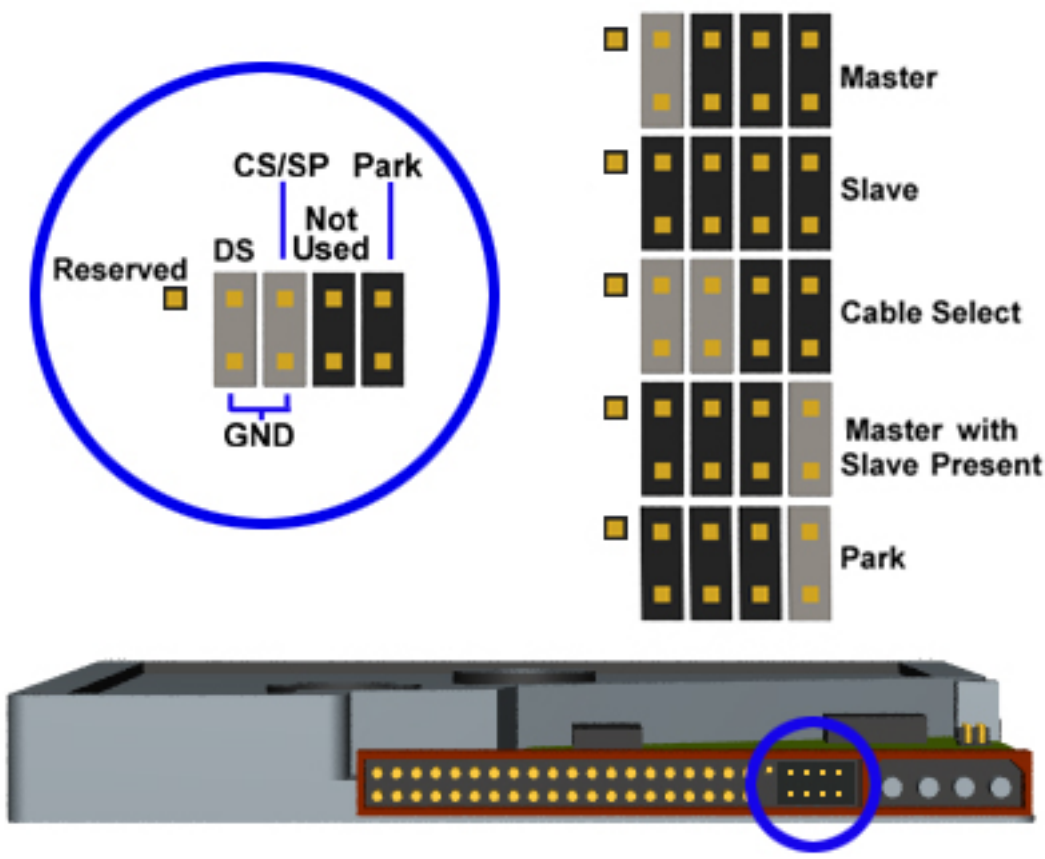
Top

3.5-Inch Hard Drive



Back to Jumpers

5.25-Inch Hard Drive

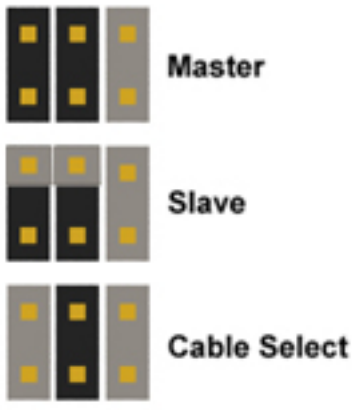


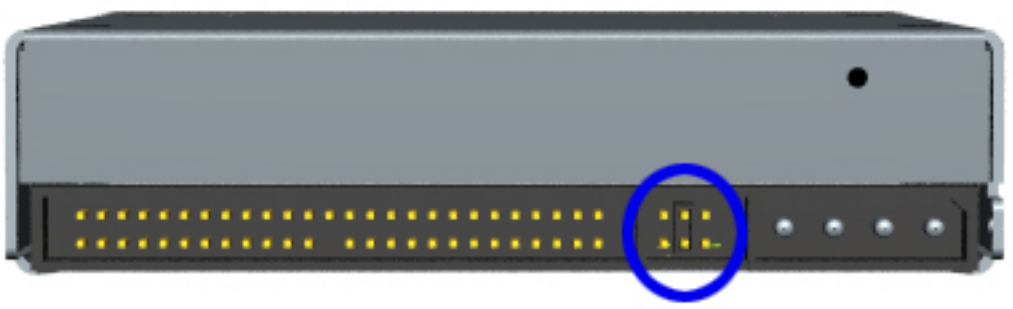
Back to Jumpers

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Digital Versatile Disk Drive

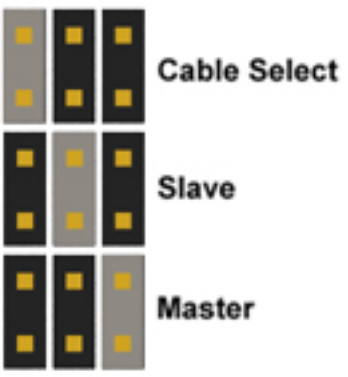




Settings may vary depending on vendor.

Back to Jumpers

CD Drive



Settings may vary depending on vendor.

Back to Jumpers

Specifications

Compaq Presario 7800 Series Personal Computer specifications are listed in the following tables. Select the specification you are interested in from the navigation bar.

Specifications

- System Specifications
- Video Memory
- System Interrupts
- System I/O
- System Memory
- System DMA
- Power Supply
- Diskette Drive
- DVD Drive
- IDE Hard Drives
- Mouse
- Fax/Modem
- CD-RW Drive

System Memory

Low Address	High Address	System Function
00000000	0009FFFF	Base Memory
000A0000	000CFFFF	NVIDIA GeForce 256
000E0000	000FFFFF	Base Memory
00100000	080FFFFF	Base Memory
08100000	0810FFFF	Conexant PCI Modem Enumerator
08110000	081100FF	Accton EN1207D Series PCI Fast Ethernet Adapter
09000000	09FFFFFF	NVIDIA GeForce 256
09000000	0A0FFFFF	VIA Tech 8598 CPU to AGP Controller
0A000000	0A00FFFF	NVIDIA GeForce 256
10000000	17FFFFFF	VIA Tech 8598 CPU to AGP Controller
10000000	17FFFFFF	NVIDIA GeForce 256
08000000	0807FFFF	Standard Direct Video Memory
08080000	080FFFFF	Optional Direct Video Memory
08100000	7FFFFFFF	unused
80000000	80FFFFFF	Memory mapped I/O devices
81000000	FDFDFFFF	unused/System ROM aliases
FDFE0000	FDFFFFFF	System ROM (alias)
FE000000	FFFDFFFF	unused
FFFE0000	FFFFFFFF	System BIOS ROM

Top

System DMA

Default DMA	Function
DMA0	ECP Printer Port (LPT1)
DMA1	Creative SB16 Emulation
DMA2	Standard Floppy Disk Controller
DMA3	Available
DMA4	Direct Memory Access Controller
DMA5	Creative SB16 Emulation
DMA6	Available
DMA7	Available

Top

Power Supply

	U. S.	Outside U. S.
Input Specifications		
Voltage Switch Setting	115 V	230 V
Nominal Line Voltage	115 VAC	230 VAC
Range Input Line	90 to 132 VAC	180 to 264 VAC
Frequency Range	47 to 63 Hz	47 to 63 Hz
Power Factor	0.55	0.55
Input Power	310 Watts	310 Watts
Input Current	6 at 90 VAC	3 at 180 VAC
Inrush Current	65 A at 115 VAC (cold start)	65 A at 230 VAC (cold start)
Holdup Time	16 ms from zero crossing at 120 VAC	16 ms from zero crossing at 240 VAC
Steady State	200 Watts	200 Watts
General Specifications		
Full Output Rating	To 122°F and 5,000 ft To 90°F and 10,000 ft (derate linearly)	To 50°C and 1524 m To 32°C and 3048 m (derate linearly)
Minimum Load	1.4 A on + 5.0 V output; 0.07 A on 12 V output	1.4 A on + 5.0 V output; 0.07 A on 12 V output
Ambient Temperature Range		
Operating	50° to 122° F	10° to 50° C
Storage	-40° to 151° F	-40° to 66° C
Dielectric Voltage Withstand		
Input to Ground	1500 VAC/1 second	
Safety Standard	UL 1950; CSA 22.2 950; TUV/VDE EN 60 950 (VDE0805/11.91); EMKO-TSE (74-SEC) 207/94	
Input Transient Susceptibility		
Common and Differential Mode (superimposed on AC line)	2500 V, 1 us, damped sinusoid 600 V, 10 us pulse	
Differential Mode	20% step change in AC input voltage	

Top

Diskette Drive

Diskettes	
Size (in)	3.5 (8.89 cm)
High Density (MB)	1.44
Low Density (KB)	720
Light	Green
Height	One-third
Bytes per Sector	512
Sectors per Track	
High Density	18
Low Density	9
Tracks per Side	
High Density	80
Low Density	80
Read/Write Heads	2
Average Seek Time (ms)	
Track-to-Track	3
Average	94
Settling Time	15
Latency Average	100

Top

CD/DVD Drive

Dimensions	**U. S.**	**Metric**
Width Height Depth	5.74 in 1.68 in 8.23 in	14.60 cm 4.29 cm 20.80 cm
Weight	1.80 lb	0.9 kg
Applicable Disc Formats		
DVD-5, DVD-9, DVD-10, DVD-18 CD-ROM CD-DA CD-XA Photo CD CD-I Ready CD-Bridge CD-R	Mode 1 and Mode 2 Audio Mode 2, Form 1 and 2 Single and Multiple Session	
Block Size		
CD-ROM Mode 0 CD-ROM Mode 1 CD-ROM Mode 2 DVD	2352 bytes 2352, 2340,2336, 2048 bytes 2352,2340, 2336, 2048 bytes 2048 bytes	
Center Hole	15 mm diameter	
Diameter	12 cm, 8 cm	
Thickness	1.2 mm	
Track Pitch	0.74 µm (DVD) 1.6 µm (CD-ROM)	
Laser		
Beam Divergence Output Power Type Wave Length	53.5 degrees ± 1.5 degrees 5 mW Semiconductor laser GaAlAs 650 nm ±25 nm (DVD) 795 nm ±25 nm (CD)	
Access Time (Typical)		
Random Full Stroke	**DVD:** < 180 ms < 300 ms	**CD:** < 120 ms < 200 ms
Audio Output Level		
Line Out Headphone	1.0 V (RMS) at 47 kW 0.7 V (RMS) at 32 W	
Cache Buffer	512 KB	
Sustained Data Transfer Rate	150 KB/sec (single, CD-ROM mode) 2100-4800 KB/sec (32× CAV CD-ROM mode) 4455-10800 KB/sec (8× CAV DVD mode)	
Interface Cable Length (Max)	18 in	
Startup Time	< 10 sec	
Stop Time	< 3 sec	

Top

Maintenance & Service Guide

Presario 7800 Series and 5900T Personal Computers

Specifications

Compaq Presario 7800 Series Personal Computer specifications are listed in the following tables. Select the specification you are interested in from the navigation bar.

Specifications
System Specifications
Video Memory
System Interrupts
System I/O
System Memory
System DMA
Power Supply
Diskette Drive
DVD Drive
IDE Hard Drives
Mouse
Fax/Modem
CD-RW Drive

IDE Hard Drives						
	10 GB	10 GB	15 GB	20 GB	30 GB	40 GB
Compaq Spare Part Number	168028-001	168029-001	170389-001	168031-001	168628-001	173342-001
Formatted Capacity Physical (MB) Logical (MB)	 10020 10020	 10005	 15020	 20020 20020	 30020 30020	 40020 40020
Transfer Rate Head (Mbits/sec) Interface (Mbytes/sec)	148.8-241.9 66	 66	 66	148.8-241.9 66	113.9-198.7 66	 66
Typical Seek Time (including settling) Single Track (mS) Average (mS) Full Stroke (mS)	 1.5 11.0 18.0	 1.0 <0.9 <20	 1 <0.9 <20	 1.5 11.0 18.0	 1.5 9.0 18.0	 1.0 <9.0 <20.0
Disk Rotational Speed (RPM)	5400	7200	5400	5400	5400	7200
Cylinders Physical Logical	16383 16383	19386 16383	19571 16383	15957 16383	33637 16383	19386 16383
Data Heads Physical Logical	3 16	2 16	1 16	6 16	4 16	8 16
Sectors per Track Physical Logical	307-512 63	325-560 63	312-576 63	307-512 63	309-539 63	325-560 63

Top

Mouse		
	U. S.	Metric
Dimensions Height Length Width	1.48 in 4.76 in 2.44 in	37.5 mm 120.8 mm 62.0 mm
Weight	6.1 oz	131 g
Base Resolution	400 DPI	
Tracking Speed (maximum)	10 in/sec	25 cm/sec
Temperature Operating Storage	32° F to 104° F -4° F to 140° F	0° C to 40° C -20° C to 60° C
Lifetime Mechanical Switch	Exceeds 300 miles Exceeds 1 million operations	Exceeds 483 km Exceeds 1 million operations
Relative Humidity	10% to 90%, noncondensing	
ESD	No soft errors through 10 kV; No hard errors through 15 kV; specific performance depends on host system	

Top

Fax/Modem			
	Conexant HCF V.90 56K Data Fax PCI Modem	**Conexant HCF V.90 56K Data Fax PCI Modem** (includes an International DAA)	**Conexant DSL**
Maximum Data Speed (kbps)	56*	56*	56*
Data	V.90, K56Flex, V.34, V.32terbo, V.32bis, V.32, V.22bis, V.22, V.21, Bell 212A, Bell 103	V.90, K56Flex, V.34, V.32terbo, V.32bis, V.32, V23, V.22bis, V.22, V.21, Bell 212A, Bell 103	V.90, K56Flex, V.34, V.32terbo,V.32bis, V.32, V.22bis, V.22, V.23, V.21, Bell 212A, Bell 103
Error Correction	V.42bis,V.42, LAPM, and MNP 2-5	V.42, LAPM, and MNP 2-4	V.42 and MNP2-4
Fax	V.17 (14.4 kbps transmission speed) V.29, V.27ter, V.21 Channel 2, Class 1 command set, Group III FAX	V.17 (14.4 kbps transmission speed) V.29, V.27ter, V.21 Channel 2, Group III FAX, Class 1 interface	V.17 (14.4 kbps transmission speed) V.29, V.27ter, V.21 Channel 2, Group III, Class 1 interface
* Both K56flex and V.90 are designed only to allow faster downloads from either K56flex or V.90 compliant digital sources. Maximum achievable download transmission rates are currently unknown, may not reach 56kbps, and will vary with line conditions.			

Top

CD-RW Drive		
Dimensions	**U. S.**	**Metric**
Width Height Depth		
Weight		
Applicable Read-Only Disc		
CD-ROM	Mode 1	
CD-ROM XA	Mode 2, Form 1 and Form 2	
CD Digital Audio		
CD Extra		
CD-I CD-I Ready	Mode 2, Form 1 and Form 2	
Photo CD	Single and Multi Session	
Video CD		
Block Size (Read-Only Disc Parameters)		
CD-R Mode 1	2048, 2352 bytes	
CD-R Mode 2, Form 1	2048, 2328, 2336, 2340, and 2352 bytes	
CD-R Mode 2, Form 2	2328, 2336, 2340, and 2352 bytes	
CD-DA	2352 and 2368 bytes	
Applicable Writeable Disc		
CD-ROM	Mode 1	
CD-ROM XA	Mode 2, Form 1 and Form 2	
CD Digital Audio		
CD-I	Mode 2, Form 1 and Form 2	
Video CD		
CD-Text		
Block Size (Writeable Disc Parameters)		
CD-RW Mode 1	2048 bytes	
CD-RW Mode 2, Form 1	2048 and 2352 bytes	
CD-RW Mode 2, Form 2	2352 bytes	
CD-DA	2352 bytes	
Center Hole	15 mm diameter	
Diameter	12 cm, 8 cm	
Thickness	1.2 mm	
Track Pitch	1.6 µm	
Laser		
Access Time		
Random Full Stroke	150 ms (typical) 350 ms (typical)	
Audio Output Level		
Line Out Headphone	1.0 V (RMS) at 47 kW 0.7 V (RMS) at 32 W	
Cache Buffer	1 Mbyte (minimum)	
Sustained Data Transfer Rate	• 300 KB/s (2X) CD-ROM, CD-R, CD-RW Read, CD-R, CD-RW Write • 600 KB/s (4X) CD-ROM, CD-R, CD-RW Read, CD-R Write • Variable 1500 to 3600 KB/s (10X to 24X) CD-ROM, CD-R Read	
Interface Cable Length (Max)	18 in	
Startup Time	< 7 sec (single, typical) < 30 sec (multisession, typical)	
Stop Time	< 4 sec	

Maintenance & Service Guide

Presario 7800 Series Personal Computers

Specifications

Compaq Presario 7800 Series Personal Computer specifications are listed in the following tables. Select the specification you are interested in from the navigation bar.

Specifications

- System Specifications
- Video Memory
- System Interrupts
- System I/O
- System Memory
- System DMA
- Power Supply
- Diskette Drive
- DVD Drive
- IDE Hard Drives
- Mouse
- Fax/Modem
- CD-RW Drive

System I/O

Low I/O Address	High I/O Address	Function
0000	000F	DMA Controller #1
0010	001F	DMA Controller Aliases
0020		Interrupt Controller #1 Control Register
0021		Interrupt Controller #1 Mask Register
0022	003D	Interrupt Controller Aliases
0040	0043	Counter/Timer
0044	004F	
0050	0053	Counter/Timer Aliases
0053	005F	
0060		Keyboard Controller Data Register
0061		Port B: SERR/IOCHK NMI, Speaker, Refresh
0062	0063	
0064		Keyboard Controller Command/Status Register

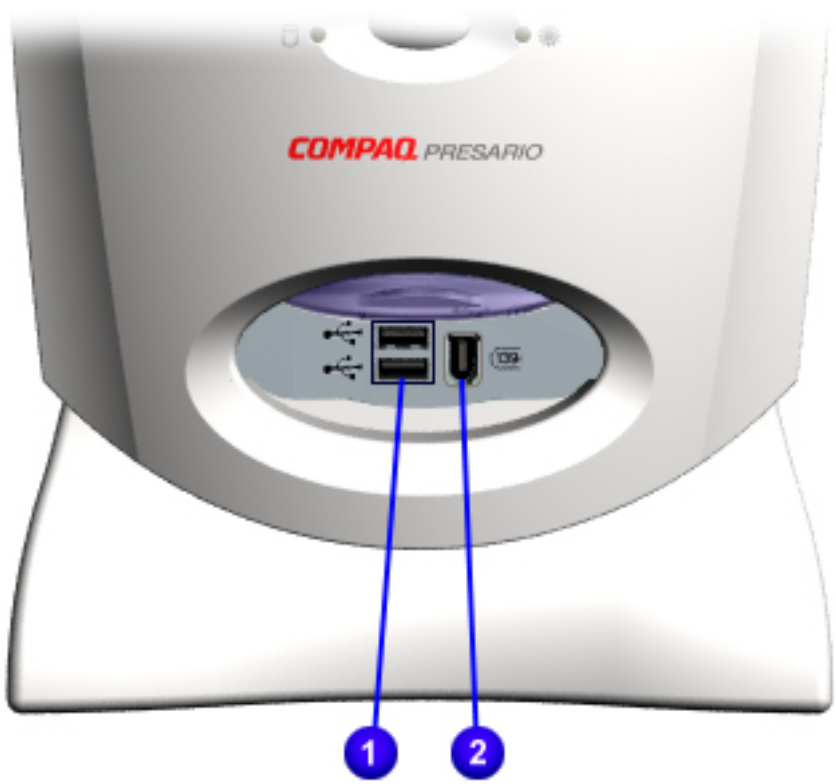
Top

0065	006F	
0070		NMI Mask Register (Bit 7)
0070		RTC/Configuration Memory Index Port (Bit 6:0)
0071		RTC/Configuration Memory Data Port
0072		RTC Extended Index
0073		RTC Extended Data
0074	007F	
0080	008F	DMA Page Registers
0090	0091	Alias of DMA page registers if SOUTH BRIDGE.4C.7=0
0092		Port 92 (fast reset and A20 gate)
0093	009F	Alias of DMA page registers if SOUTH BRIDGE.4C.7=0
00A0		Interrupt Controller #2 Control Register
00A1		Interrupt Controller #2 Mask Register
00A2	00B1	
00B4	00BF	
00C0	00DF	DMA Controller #2
00E0		ESS Index Register
00E1		ESS Data Register
00E2	00E3	DDC2 Registers
00E4	00E5	Master I2C Interface
00E6		TV/MPEG Configuration Register
00E7	00E9	
00EA		Ultra I/O Index Register
00EB		Ultra I/O Data Register
00EC	00EF	Modem configuration
00F0	00F1	Coprocessor Busy Clear/Reset
00F2	00F8	
00F9		Lock Configuration Register (Dummy Write)
00FA		
00FB		Unlock Configuration Register (Dummy Write)
00FD	00FF	
0100	0101	
0102		Video: POS. 102 register
0103	012F	
0132	016F	
0170	0177	Secondary IDE Controller
0178	01EF	
01F0	01F7	Primary IDE Controller
01F8	0200	
0201		
0202	021F	
0220	022F	
0230	025F	
0260	0263	
0264	0277	
0278	027F	Reserved-Parallel Port
0280	02E7	
02E8	02EF	Reserved-Serial Port (COM4)
02F0	02F7	
02F8	02FF	(COM2)
0330	0331	
0332	036F	
0370	0377	Reserved-Floppy Drive Controller 2
0378	037F	Parallel Port
0380	0387	
0388	038B	
038C	03B3	
03B4	03B5	Video: Monochrome
03B6	03B9	
03BA		Video: Monochrome
03BB		
03BC	03BF	Reserved-Parallel Port
03C0	03CF	Video: VGA Registers
03D0	03D3	
03D4	03D5	Video: Color
03D6	03D9	
03DA		Video: Color
03DB	03E7	
03E8	03EF	Reserved-Serial Port (COM3)
03F0	03F7	Floppy Disk Controller (Primary)
03F6	03F7	IDE Interface (Fixed Disk and CD-ROM)
03F8	03FF	Serial Port (COM1)
0400	04EF	
04D0		Interrupt Controller #1 Edge/Level Control
04D1		Interrupt Controller #2 Edge/Level Control
04D2	0677	
0678	067A	Parallel Port ECP Mode
0778	077A	Parallel Port ECP Mode
0CF8		PCI Configuration Index (32-bit I/O only)
0CFC		PCI Configuration Data
46E8		Video: Adapter Sleep

Top

Product Description

Digital Creativity Imaging Center



Description	
1	USB (Universal Serial Bus) connector
2	IEEE 1394 connector

Back to Product Description

Product Description

Power Management Features

Compaq Presario 7800 Series Personal Computers use ACPI (Advanced Configuration and Power Interface) for system power management. ACPI is an open industry specification that provides reliable power management through improved hardware and operating system coordination.

The following is a list of the power management features:

- **Power Status Lights**. You can quickly tell the sleep condition of the system by glancing at the Power Status Lights on the unit or keyboard.
- **Automatic Sleep**. In Windows 98, there are different Power Schemes under which the system goes into Sleep mode automatically when it times out. The optional settings for Windows 98 are **Home/Office Desk**, **Portable/Laptop**, and **Always On**. The system supports different levels of power management for varying patterns of computer usage.
- **Default and Adjustable timeout settings**. The default setting for Sleep timeout is 30 minutes. The Sleep timeout value can be set in the **Control Panel** by clicking the **Power Management** icon. At the **Properties** screen, click **System Standby**, **Turn off Monitor**, and **Turn off Hard Disk** to set the length of time before the system goes to sleep.
- **Manual Sleep**. To manually put your computer into sleep mode in the Windows 98 desktop, press the **Sleep** button (on the keyboard). The power status light on the CPU will light to show that Sleep mode is activated.
- **Other manual standby options**. Another way to put your computer into sleep mode manually under Windows 98 is to select **Start**, then **Shutdown**. Select **Standby** from the list of choices to put the system into Sleep mode. The system can then be turned off or left in Sleep. When the Sleep button is pressed, the system returns to the previous Windows 98 Desktop state.
- **Wake-up events**. Events that bring a system back to the working state include:
  - Pressing the Sleep button on the keyboard
  - Pressing the CPU Power button
  - Answering a call from Fax/Modem
- **Synchronized software and hardware volume control buttons**.

Top

States of Power Management

Power management can be defined by three distinct power states in which the computer operates: On, Off, and Sleep. The following table describes the power states and lists the power consumption of each state:

Power Management States		
Energy State	**Description**	**Power Consumption**
On	Power is available to the system. The AC cable is connected, and the power status light is green.	90 Watts avg., 110 Watts max
Off	Power is not available to the system and the AC cable is disconnected. The power status light is not lit.	0 Watts
Soft Off	Power is available to the system, the AC cable is connected, and the power status light is off.	1-2 Watts
Sleep	Power is available to the system, the AC cable is connected, and the computer is in a low power/standby mode. The power status light is amber.	27 Watts

Top

Back to Product Description

Product Description

Power Cord Set Requirements

The voltage select switch feature on the computer allows it to operate from any line voltage between 120 and 240 volts AC.

The power cord set (flexible cord and wall plug) supplied with the computer meets the general requirements for use in the country where the computer was purchased.

Power cord sets for use in other countries must meet the requirements of the country where the computer is used. For more information on power cord set requirements, contact a Compaq authorized dealer, reseller, or service provider.

General Requirements

The requirements listed below are applicable to all countries.

1. The length of the power cord set must be at least 6.00 feet (1.8 m) and no longer than 9.75 feet (3.0 m).

2. All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.

3. The power cord set must have a minimum current capacity of 10A and a nominal voltage rating of 125 or 250 volts AC, as required by each country's power system.

4. To mate with the appliance inlet on the Switch Box, the appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C13 connector.

Country-Specific Requirements

Power Cord Set Requirements by Country		
Country	**Accredited Agency**	**Applicable Note Numbers**
Australia	EANSW	1
Austria	OVE	1
Belgium	CEBC	1
Canada	CSA	2
Denmark	DEMKO	1
Finland	SETI	1
France	UTE	1
Germany	VDE	1
Italy	IMQ	1
Japan	JIS	3
Norway	NEMKO	1
Sweden	SEMKO	1
Switzerland	SEV	1
United Kingdom	BSI	1
United States	UL	2

NOTES:

1. The flexible cord must be <HAR> Type HO3VV-F, 3-conductor, 1.0 mm2 conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country where it will be used.

2. The flexible cord must be Type SJT-2 or equivalent, No. 18 AWG, 3-conductor. The wall plug must be a two-pole grounding type with a NEMA 5-15P (15A, 125V) or NEMA 6-15P (15A, 250V) configuration.

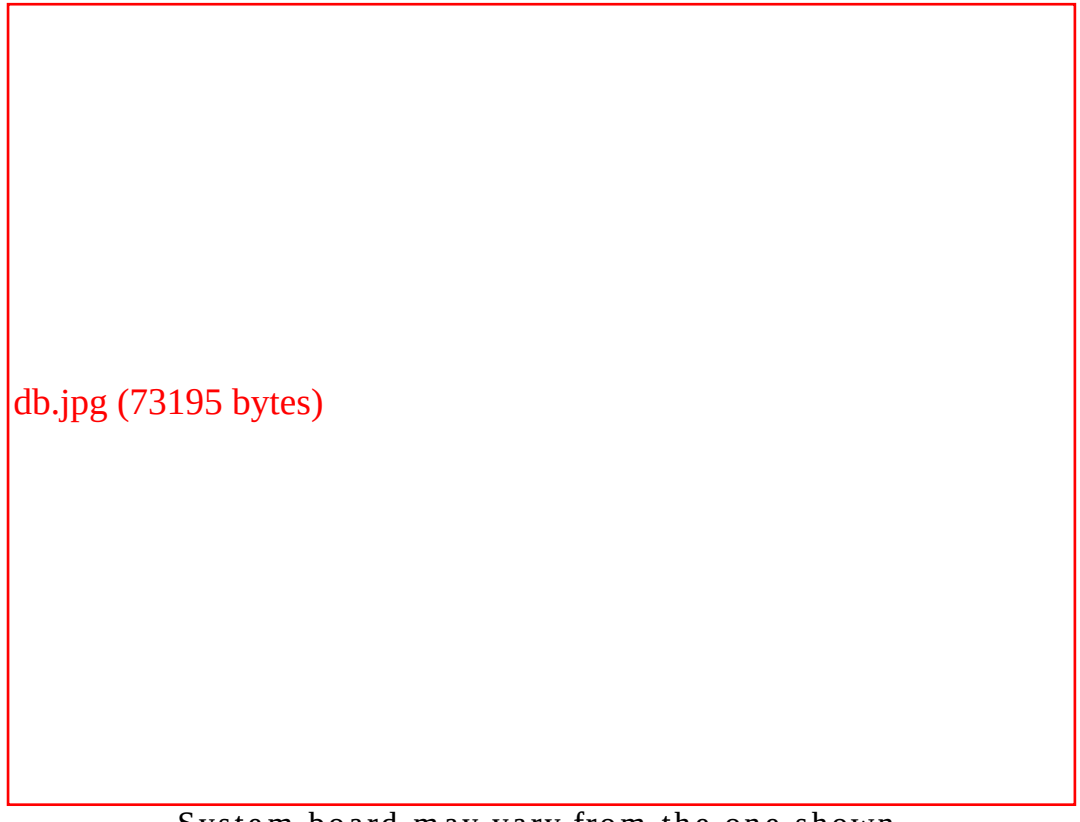
3. The appliance coupler, flexible cord, and wall plug must bear a "T" mark and registration number in accordance with the Japanese Dentori Law. Flexible cord must be Type VCT or VCTF, 3-conductor, 0.75mm2 conductor size. The wall plug must be a two-pole type with a Japanese Industrial Standard C8303 (15A, 125V) configuration.

Back to Product Description

Removal and Replacement

Service Considerations - Optical Drive Cable Positions

Cable Positions
Optical Drive
Digital Creativity Imaging Center
3.5-Inch Hard Drive
5.25-Inch Hard Drive
Zip Drive
Diskette Drive
Service Considerations Index Page



System board may vary from the one shown.

Connect CD/DVD data cable to system board connector (J7 or IDE2).

If connecting CD/DVD and CD-RW, use cable drive 0 to CD/DVD and drive 1 to CD-RW.

Back to Removal and Replacement

Removal and Replacement

Service Considerations - Digital Creativity Imaging Center Cable Positions

Cable Positions
Optical Drive
Digital Creativity Imaging Center
3.5-Inch Hard Drive
5.25-Inch Hard Drive
Zip Drive
Diskette Drive
Service Considerations Index Page

dg.jpg (59140 bytes)

Connect the Digital Creativity Imaging Center (or front I/O panel) cable to system board connector (J4 or USB2).

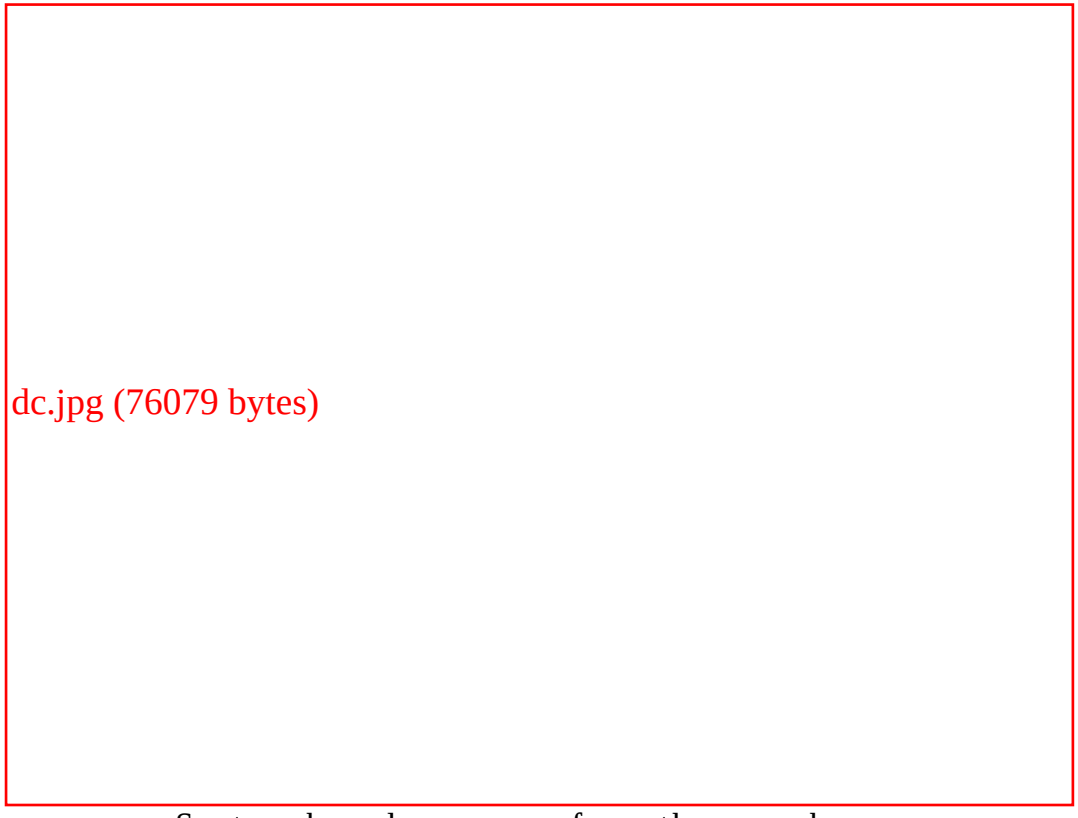
System board and cable size may vary from the one shown.

Back to Removal and Replacement

Removal and Replacement

Service Considerations - 3.5-Inch Hard Drive Cable Positions

Cable Positions
Optical Drive
Digital Creativity Imaging Center
3.5-Inch Hard Drive
5.25-Inch Hard Drive
Zip Drive
Diskette Drive
Service Considerations Index Page



System board may vary from the one shown.

WARNING: AC power must be disconnected.

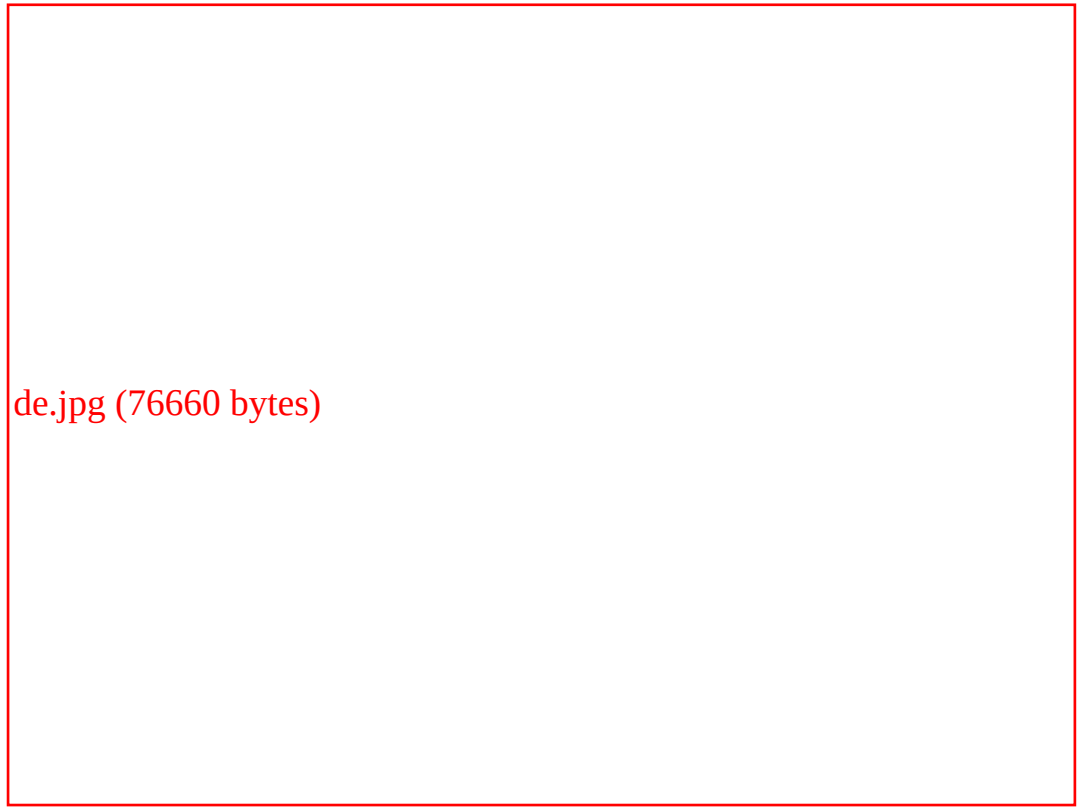
Connect the hard drive data cable to system board connector (J6 or IDE1).

Back to Removal and Replacement

Removal and Replacement

Service Considerations - 5.25-Inch Hard Drive Cable Positions

Cable Positions
Optical Drive
Digital Creativity Imaging Center
3.5-Inch Hard Drive
5.25-Inch Hard Drive
Zip Drive
Diskette Drive
Service Considerations Index Page



System board may vary from the one shown.

Connect the hard drive data cable to system board connector (J6).

If connecting a hard drive and a zip drive, use cable drive 0 to hard drive and drive 1 to zip drive.

Back to Removal and Replacement

Removal and Replacement

Service Considerations - Zip Drive Cable Positions

Cable Positions
Optical Drive
Digital Creativity Imaging Center
3.5-Inch Hard Drive
5.25-Inch Hard Drive
Zip Drive
Diskette Drive
Service Considerations Index Page

df.jpg (70984 bytes)

Connecting Zip Drive Cable

Without CD-RW: Use the same cable to connect the CD/DVD and Zip drive.

Connect the data cable drive 0 to CD/DVD and drive 1 to Zip drive, then connect to system board (J7 or IDE2).

With CD-RW: Use the same cable to connect the hard drive and Zip drive.

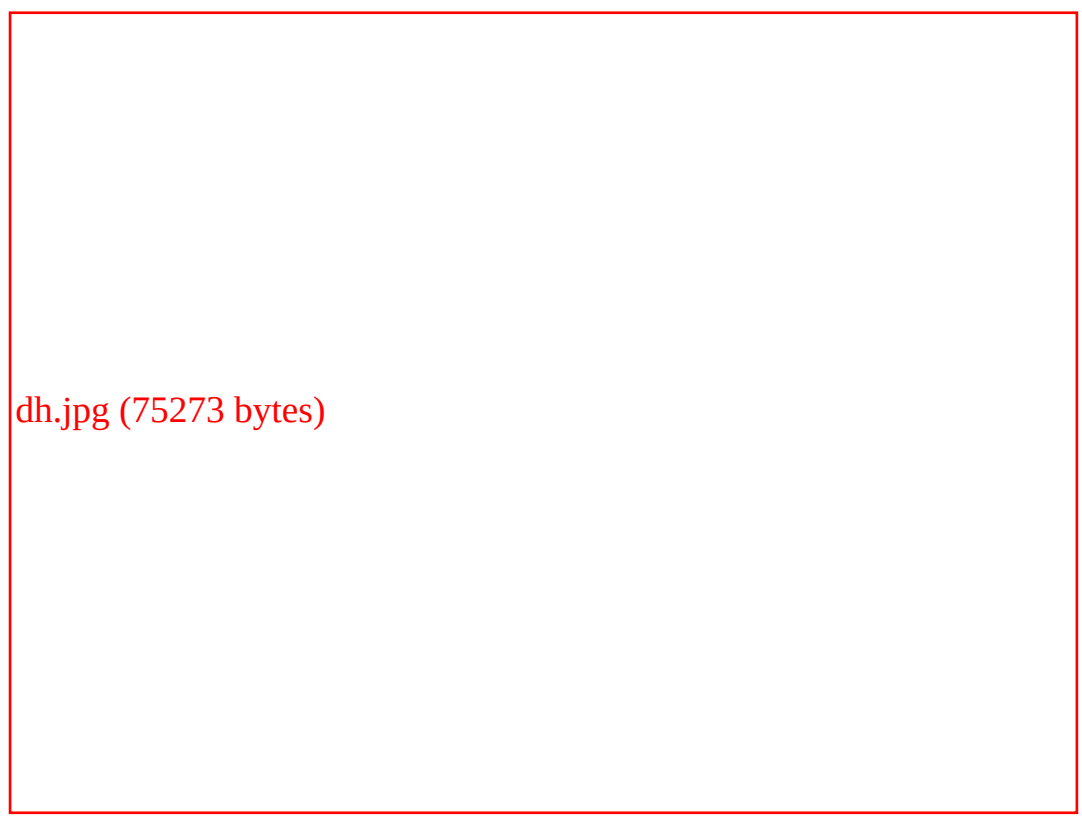
Connect the data cable drive 0 to hard drive and drive 1 to Zip drive, then connect to system board (J6 or IDE1).

Back to Removal and Replacement

Removal and Replacement

Service Considerations - Diskette Drive Cable Positions

Cable Positions
Optical Drive
Digital Creativity Imaging Center
3.5-Inch Hard Drive
5.25-Inch Hard Drive
Zip Drive
Diskette Drive
Service Considerations Index Page



Connect diskette drive data cable to system board connector (J5 or FDD1).

System board may vary from the one shown.

Back to Removal and Replacement